









*With the compliments of the Society.*



# REPORTS

OF THE

## SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN.

VOLUME I.

SESSION OF 1900-1901.

*Edited by the Hon. Secretaries:*

SYDNEY STEPHENSON, C.M., }  
GEORGE CARPENTER, M.D., } London.  
THEODORE FISHER, M.D., Provincial.

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**PUBLICATION COMMITTEE.**

*Appointed by the Council, July the 8th, 1901.*

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GEORGE CARPENTER, M.D.

EDMUND CAUTLEY, M.D.

THEODORE FISHER, M.D.

R. CLEMENT LUCAS, B.S.

SYDNEY STEPHENSON, C.M.

OFFICERS AND MEMBERS OF THE COUNCIL FOR  
THE SESSION OF 1901-1902.

ELECTED AT THE ANNUAL GENERAL MEETING,  
JULY THE 26TH, 1901.

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*Council.*

HENRY G. ARMSTRONG (Wellington College).  
HENRY ASHBY, M.D. (Manchester).  
FLETCHER BEACH, M.B.  
JAMES CARMICHAEL, M.D. (Edinburgh).  
EDMUND CAUTLEY, M.D.  
WAYLAND C. CHAFFEY, M.D. (Brighton).  
W. WATSON CHEYNE, M.B.  
WALTER EDMUNDS, M.C.  
LEONARD G. GUTHRIE, M.D.  
ROBERT HUTCHISON, M.D.  
FRANCIS JAFFREY.  
ROBERT JONES (Liverpool).  
CHARLES J. MACALISTER, M.D. (Liverpool).  
JOHN McCAW, M.D. (Belfast).  
LEWIS MARSHALL, M.D. (Nottingham).  
HENRY BETHAM ROBINSON, M.S.  
A. ERNEST SANSOM, M.D.  
GEORGE E. SHUTTLEWORTH, M.D. (Richmond, Surrey).  
GEORGE A. SUTHERLAND, M.D.  
FREDERICK TAYLOR, M.D.  
JAMES TAYLOR, M.D.  
ALFRED H. TUBBY, M.S.  
CHARLES H. WILLEY, M.D. (Sheffield).  
DAWSON WILLIAMS, M.D.

*Honorary Treasurer.*

R. CLEMENT LUCAS, B.S.

*Honorary Secretaries.*

SYDNEY STEPHENSON, C.M. } London.  
GEORGE CARPENTER, M.D. }  
THEODORE FISHER, M.D., Provincial.

## HISTORY OF THE FORMATION OF THE SOCIETY.

TOWARDS the end of May, 1900, a circular (of which a copy is appended) was issued to members of the honorary medical and surgical staffs of the Children's Hospitals in London and the provinces, as well as to a few gentlemen known to be specially interested in the subject of children's diseases.

### *Copy of Circular.*

“ 33, WELBECK STREET,  
“ LONDON, W.

“ SIR,

“ It is proposed to form a Society devoted exclusively to the study of children's diseases. A preliminary meeting will be held at 5.30 p.m. on Monday, June the 11th, at 20, Hanover Square, London, W.

“ If you are not able to attend the meeting, we shall be glad if you will let us know (a) whether you are in favour of the formation of such a Society, and (b) whether you would care to become a member,

“ We need scarcely add that we shall be glad to receive any suggestions that may occur to you, and to lay them before the meeting.

“ We are, Sir,

“ Yours obediently,

“ ALFRED H. TUBBY,  
“ SYDNEY STEPHENSON.”

The response to the foregoing circular was most encouraging. Offers of help were received from all parts of the country. The preliminary meeting was duly held. Dr. A. Ernest Sansom occupied the chair. It was agreed unanimously to form a Society for the study of children's diseases, and a Provisional Committee was appointed to give effect to the decision of the meeting. The Provisional Committee was composed of the following gentlemen:—Henry G. Armstrong, Henry Ashby, Wayland C. Chaffey, Arthur Downes, Walter Edmunds, Theodore Fisher, Jonathan Hutchinson, David B. Lees, R. Clement

Lucas, Howard Marsh, Lewis Marshall, John McCaw, D'Arcy Power, Humphry D. Rolleston, Arthur E. Sansom, George E. Shuttleworth, Harold J. Stiles, George A. Sutherland, Alfred H. Tubby, Dawson Williams, and Sydney Stephenson (Hon. Secretary *pro tem.*).

The Provisional Committee, after deciding the broad lines upon which the Society should be conducted, appointed a sub-committee for the purpose of drafting the constitution of the new body. The sub-committee, which included A. Ernest Sansom, David B. Lees, George A. Sutherland, Alfred H. Tubby, and Sydney Stephenson, met on several occasions, and drafted the laws of the Society. These laws, after receiving the approval of the Provisional Committee, were adopted at an inaugural meeting of the Society held on July the 24th, 1900, at 20, Hanover Square, W. At the same meeting the following gentlemen were appointed to serve as the first Officers and Council of the Society, *viz.* :

*Council.*—Henry G. Armstrong, Henry Ashby, Fletcher Beach, George Carpenter, Edmund Cautley, Wayland C. Chaffey, Arthur Downes, Walter Edmunds, Theodore Fisher, Leonard Guthrie, Robert Jones, David B. Lees, Lewis Marshall, John McCaw, D'Arcy Power, Humphry D. Rolleston, A. Ernest Sansom, George E. Shuttleworth, Harold J. Stiles, George A. Sutherland, James Taylor, Alfred H. Tubby, William H. Vicary, Dawson Williams.

*Officers.*—Hon. Treasurer, R. Clement Lucas; Hon. Secretaries, Sydney Stephenson and Charles H. Willey.

## RULES.

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### NAME.

1. The name of the Society shall be "The Society for the Study of Disease in Children."

### OBJECT OF THE SOCIETY.

2. The object of the Society shall be the study of disease and of allied subjects in children.

### CONSTITUTION.

3. The Society shall consist of Ordinary, Temporary, and Honorary Members.

### QUALIFICATION FOR MEMBERSHIP.

4. All duly registered medical men shall be eligible for membership.

### OFFICERS.

5. The officers of the Society shall be elected from the ordinary members, and shall include an Honorary Treasurer, Honorary Secretaries (one of whom shall be resident in the London postal district, and one in some other part of Great Britain or Ireland), and twenty-four other members, of whom at least one third shall not be resident in the London postal district. These together shall constitute the Council, and manage the affairs of the Society.

### ORDINARY MEMBERS.

6. The names of candidates shall be proposed upon a printed form provided for the purpose, and signed by two or more members from personal knowledge. The names of candidates shall in the first instance be submitted to the Council, in which shall be vested the absolute power of declining to allow the

Lucas, Howard Marsh, Lewis Marshall, John McCaw, D'Arcy Power, Humphry D. Rolleston, Arthur E. Sansom, George E. Shuttleworth, Harold J. Stiles, George A. Sutherland, Alfred H. Tubby, Dawson Williams, and Sydney Stephenson (Hon. Secretary *pro tem.*).

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6. The names of candidates shall be proposed upon a printed form provided for the purpose, and signed by two or more members from personal knowledge. The names of candidates shall in the first instance be submitted to the Council, in which shall be vested the absolute power of declining to allow the

nomination to proceed. The proposal paper, after approval by the Council, shall be read at an Ordinary Meeting of the Society; and the ballot shall take place at the next meeting. No election shall be valid unless at least ten members vote, and no candidate shall be elected who fails to obtain four fifths of the votes recorded. No rejected candidate shall be eligible for proposal until twelve months have elapsed.

#### FORM OF ADMISSION.

7. Every Ordinary Member, after his election, and after payment of the annual subscription, and of the entrance fee (if any), shall sign the roll of members, declaring thereby his adhesion to the Rules of the Society.

#### TEMPORARY MEMBERS.

8. Any resident medical officer of a hospital or infirmary shall be eligible for election by the Council as a Temporary Member of the Society for a period of twelve months, without payment of any subscription or entrance fee. He shall be entitled to attend the ordinary Meetings, but he shall not have a vote, shall not be eligible for office, shall not be entitled to receive a copy of the 'Reports,' and shall not introduce visitors. If, at the termination of the period for which he has been elected a Temporary Member, he desires to become an Ordinary Member of the Society, he must go through the usual form of election, but shall be exempt from paying any entrance fee.

#### HONORARY MEMBERS.

9. The Council shall have power to propose for election as Honorary Members the names of persons eminent in medicine, surgery, or the collateral sciences. The Honorary Members, who shall not exceed twelve in number, shall be balloted for, after proposal by the Council, at a General Meeting of the Society, and be subject to the same rules as govern the election of ordinary members. They shall enjoy all the privileges of ordinary members, voting excepted. They shall not be called upon to pay any fee or subscription.

#### RESIGNATION AND EXPULSION OF MEMBERS.

10. Any member may retire from the Society on giving written notice of the intention to do so to one of the Secretaries and on paying any contributions that may be due.

The name of any member may be expunged from the Society's roll only at a General Meeting convened by the Council specially

for consideration of the case. At least ten votes must be recorded, and four fifths of the votes, if recorded in favour of the expulsion, shall be decisive. Any person expelled in accordance with this rule shall forfeit all claim upon the Society.

#### SUBSCRIPTIONS.

11. The annual subscription for Ordinary Members shall be One Guinea, payable in advance at the beginning of the session in October. Ordinary Members elected after July the 31st, 1901, shall pay an entrance fee of One Guinea; but in the case of any member elected subsequently to Easter in any year the member shall not be called upon to pay a subscription during the ensuing session. Original Members pay no entrance fee. A member shall at any time be exempted from further annual subscriptions by paying a composition fee of Ten Guineas.

A member whose subscription is six months in arrear shall be reminded of the fact by one of the Honorary Secretaries; and if the amount due remain unpaid during the current year, his name may be removed by the Council from the list of members.

#### ELECTION OF OFFICERS.

12. The Officers of the Society shall be elected by ballot at the Annual Meeting. No member, except the Honorary Treasurer, may hold the same office for a longer period than three consecutive years. A list of names recommended by the Council for election shall be sent to each ordinary member at least fourteen days before the Annual Meeting of the Society. A name or names may be substituted on the voting paper for that of any member or members proposed by the Council for election. Two Scrutineers shall be appointed by the Chairman at the commencement of the Annual Meeting, and their duty shall be to receive and examine the balloting lists, and report the results to the meeting. In the case of equal voting the Chairman shall decide by lot.

#### HONORARY TREASURER.

13. The Honorary Treasurer shall have charge of the funds of the Society, and keep an account in an orderly and business-like way of all sums that pass through his hands. He shall receive all moneys due to, and pay all moneys due from, the Society, only after the accounts have been passed by the Council and signed by two of the members present. He shall keep a printed receipt-book for subscriptions and fees, and every receipt shall be signed by him and countersigned by one of the Honorary Secretaries. He shall prepare an annual state-

ment of accounts, which shall be audited by two ordinary members of the Society not in office, and presented, with the Council's Report, to the next Annual Meeting. He shall keep a separate banking account in the name of the Society, and shall invest the funds from time to time as directed by the Council. The Honorary Treasurer shall be *ex officio* a member of Council.

#### HONORARY SECRETARIES.

14. The Honorary Secretaries (or one of them) shall conduct all correspondence, notify to new members their election, and convene, attend, and minute all meetings of the Society, of the Council, and of any committees appointed by the Council. They shall arrange the order of proceedings at all meetings. They shall submit to the Council all official communications and all nominations for membership in the Society. They shall keep a register of all cases and papers communicated to the Society, and, unless otherwise decided by the Council, shall act as editors of all publications authorised by the Council. They shall keep a roll of the officers and members of the Society. In the discharge of these various duties the Secretaries shall have power to employ clerical assistance, to use printed or typed forms, and to prepay postages and telegrams. They shall be *ex officio* members of Council.

#### MEETINGS.

15. These shall be *Ordinary, Special, and General*.

*Ordinary Meetings* shall be held at hospitals in London or elsewhere, or in places appointed by the Council. There shall not be more than eight Ordinary Meetings in the year, and of these one at least shall be held elsewhere than in London. The meetings shall take place upon the third Friday in the months of October, November, January, February, March, April, May, and June, at 5.30 p.m., unless otherwise arranged by the Council. They shall not be of longer duration than two hours, except by special resolution of the Meeting. Clinical and Pathological Demonstrations, and discussions thereon, shall take precedence over papers. Nothing relating to the laws or the management of the Society shall be discussed at an Ordinary Meeting.

*Special Meetings* may be convened by the Council for the purpose of discussing a subject or subjects deemed to be of particular interest in relation to disease in children, or to allied subjects.

A *General Meeting* shall be called by the Honorary Secretaries on the requisition of any five members of Council or of any twenty ordinary members of the Society. At least fourteen days' notice shall be given to every ordinary member of the

Society; and the character of the business to be transacted at such meeting shall be stated on the summons paper. No business other than that set forth upon the summons paper shall be considered at the meeting.

The *Annual General Meeting* shall be held at a time and in a place determined by the Council, fourteen days' notice having been given to every ordinary member of the Society. Its business shall include election of officers, presentation of the annual Report of the Council, and the discussion of any proposed alteration or alterations in the rules (notice of which shall be given in the summons convening the meeting). Ten ordinary members shall form a quorum. No change in the rules shall be valid unless three fourths of the votes are recorded in favour of the alteration. A notice, written or printed, may be served upon any member, either personally or by sending it through the post in a prepaid letter, addressed to such member at his registered address.

#### CHAIRMAN.

16. A Chairman, who must be an ordinary member of the Society, shall be chosen by show of hands or by ballot at the commencement of each meeting, whether ordinary, special, or general. He shall sign the minutes of the preceding meeting or meetings, regulate the proceedings, check irregularities, interpret the application of the laws, and enforce the recognised rules of debate. The Chairman shall have an ordinary and a casting vote.

#### PUBLICATIONS.

17. Reports shall be published in such manner and at such times as the Council may direct. A copy shall be forwarded free to every Honorary Member of the Society, and to every ordinary member whose subscription is not in arrear.

#### VISITORS.

18. An ordinary member may introduce two medical men as visitors at ordinary meetings of the Society. Visitors shall sign their names in the book provided for the purpose. On the invitation of the Chairman, visitors shall be permitted to take part in the discussions of the Society. The same visitor shall not be introduced more than twice during one session.

#### COUNCIL.

19. The Council shall have the management of the affairs of the Society, and shall meet as often as may be necessary for the

transaction of business. Seven days' notice of each meeting shall be sent by the Honorary Secretaries to every member of Council. Five members shall form a quorum. The Council shall determine questions, if necessary, by ballot. The Council, at its first meeting, shall elect from amongst its members a Chairman, to preside over its deliberations during the session. He shall not hold office for longer than two consecutive years. In his absence the chair shall be taken by some other member of Council, duly proposed and seconded. The Chairman of Council shall have a casting, in addition to an ordinary vote. The Council shall from time to time make regulations, issue instructions, appoint committees, and take any other lawful steps to further the good government of the Society. He shall prepare and present to the Annual Meeting a Report upon the state of the Society. The Council shall be empowered to fill all vacancies that may occur from death or otherwise between one Annual Meeting and another. It shall decide all questions relating to the publication of the "Reports." It shall annually depute three of its members, with the Honorary Secretaries, to form a *Committee of Reference*, the duty of which shall be to determine the acceptance of communications referred to it by the Honorary Secretaries. The Council shall be elected by ballot at the Annual Meeting. One third of its members, exclusive of the Honorary Treasurer and the Honorary Secretaries, shall be replaced annually by an equal number of ordinary members of the Society. An Extraordinary Meeting of Council may be called (1) by the Chairman of Council; or (2) by the Honorary Secretaries, and (3) shall be called by the Honorary Secretaries on the requisition of any five members of Council. Seven days' notice of such extraordinary meeting must be given in writing by the Honorary Secretaries to every member of Council upon a summons paper specifying the object for which the meeting is called.

## ANNUAL REPORT OF THE COUNCIL.

*Presented at the General Meeting on July the 26th, 1901.*

THE Council have pleasure in reporting that during the past session the membership of the Society has increased from 102 to 237. Of the latter number 144 belong to London and its suburbs, 82 to the provinces, 4 to Scotland, and 7 to Ireland. The Council deplore the loss by death of one member of the Society, namely, Dr. Leslie Ogilvie, Physician to the Paddington Green Children's Hospital.

The meetings of the Society at the various children's hospitals in London have been well attended, the average attendance being about 40.

The provincial meeting of the Society was held at Liverpool on June the 29th, 1901. The attendance was over 70, the cases numerous, and the papers interesting. The meeting was an unqualified success. The Council desire to express the indebtedness of the Society to Mr. Robert Jones, Dr. Charles J. Macalister, and Dr. James Barr, all of Liverpool, who organised the local arrangements for the meeting.

The Council have arranged for the issue of a volume of "Reports" as soon as possible.

The Treasurer's Balance-sheet (which is in the hands of members) shows a satisfactory financial condition.

## TREASURER'S REPORT AND BALANCE-SHEET.

*Made up to July the 22<sup>nd</sup>, 1901.*

ASSETS.		PAYMENTS.		£ s. d.	
9 Composition Fees	... £ s. d.	Cheque Book	... £ s. d.	0 2 6	
159 Subscriptions	... 94 10 0	Royal Medical and Chir. Society	... 3 3 0		
	... 166 19 0	Medical Society	... 2 2 0		
		G. Pullman and Sons, Printing, etc.	... 67 17 0		
		Mr. Dickinson, Shorthand	... 15 2 3		
		Hon. Secretary's Expenses	... 5 15 0		
		Hon. Treasurer's Expenses	... 0 12 6		
				94 14 3	
				166 14 9	
				£261 9 0	

We, the undersigned, have examined the foregoing accounts, together with the Vouchers and Bank Book, and find them correct.

R. CLEMENT LUCAS, *Hon. Treasurer*.

*Auditors,* { ARNOLD LAWSON.  
{ ANDREW FULLER.

*Meetings of the Society were held during the Session of 1900–1901 at the under-mentioned places :*

1. Friday, October the 19th, 1900.—The Medical Society, Chandos Street, Cavendish Square, W. Dr. SANSOM in the Chair.
2. Friday, November the 16th, 1900.—The Evelina Hospital for Children, Southwark Bridge Road, S.E. Mr. R. CLEMENT LUCAS in the Chair.
3. Friday, January the 18th, 1901.—The East London Hospital for Children, Shadwell, E. Dr. DAWSON WILLIAMS in the Chair.
4. Friday, February the 15th, 1901.—Paddington Green Children's Hospital, W. Mr. WATSON CHEYNE in the Chair.
5. Friday, March the 15th, 1901.—Belgrave Hospital for Children, 79, Gloucester Street, S.W. Dr. CAUTLEY in the Chair.
6. Friday, April the 19th, 1901.—North-Eastern Hospital for Children, Hackney Road, N.E. Dr. SANSOM in the Chair.
7. Friday, May the 17th, 1901.—Victoria Hospital for Children, Queen's Road, Chelsea, S.W. Mr. D'ARCY POWER in the Chair.
8. Saturday, June the 29th, 1901 (Provincial Meeting).—Medical Institution, Hope Street, Liverpool. Mr. ROBERT JONES (of Liverpool) in the Chair.
9. Friday, July the 26th, 1901 (Annual General Meeting).—The Medical Society, Chandos Street, Cavendish Square, W. Dr. SANSOM in the Chair.



## LIST OF MEMBERS OF THE SOCIETY.

OCTOBER, 1901.

(O.M. = Original Member. T. = Treasurer. S. = Secretary.  
C. = Member of the Council. \* = Life Member.)

### *Elected*

O.M. ABBOTT, FRANCIS CHARLES, M.S., Asst. Surgeon St. Thomas's Hospital; Surgeon to the Evelina Hospital for Sick Children; 34, Weymouth Street, W.

O.M. ABRAHAMS, BERTRAM LOUIS, M.B., Medical Registrar Westminster Hospital; 14, Welbeck Street, W.

O.M. ACHARD, ALEXANDER LOUIS, M.D., 9, Blandford Street, Manchester Square, W.

1901 ALLINGHAM, HERBERT WILLIAM, Surgeon to H.M. the King; Surgeon Great Northern Hospital; Asst. Surgeon St. George's Hospital; 25, Grosvenor Street, W.

O.M. ALLIOTT, ALEXANDER JOHN, M.D., Surgeon Hip Hospital, Sevenoaks; The Vine, Sevenoaks.

1901 ANDRIESEN, WILLIAM LLOYD, M.D., 7, Apsley Terrace, Acton.

1901 ARCHDALE, MERVYN A., M.B., County Asylum, Rainhill, near Liverpool.

O.M. ARMSTRONG, HENRY GEORGE, Medical Officer Wellington College; Wellington College, Berks. (C.)

1901 ARMSTRONG, JOHN T., 109, North End Road, West Kensington, W.

*Elected*

O.M. ASHBY, HENRY, M.D., Physician Manchester General Hospital for Children ; Lecturer on Diseases of Children, Owens College ; 13, St. John Street, Manchester. (C.)

O.M. BARNARDO, THOMAS JOHN, 18, Stepney Causeway, London, E.

1900 BARR, JAMES, M.D., Physician Royal Infirmary, Liverpool ; 72, Rodney Street, Liverpool.

1901 BATTAMS, J. SCOTT, 123, Lavender Hill, S.W.

O.M. BEACH, FLETCHER, M.B., Physician West End Hospital for Diseases of the Nervous System ; Winchester House, Kingston Hill, Surrey. (C.)

1901 BEDDARD, ARTHUR PHILIP, M.D., Senior Asst. Physician and Pathologist West London Hospital ; 44, Seymour Street, W.

1900 BLAGG, ARTHUR F., M.D., Physician Orthopædic Hospital for Children, Bristol ; 28, Caledonia Place, Clifton, Bristol.

O.M. BLUCK, WALTER CARDY, M.B., Byford House, York Road, Southend-on-Sea.

O.M. BLUMFIELD, JOSEPH, M.D., Anaesthetist St. George's Hospital ; Sloane Terrace Mansions, S.W.

1900 BOLUS, HARRY BOULCOTT, M.B., Haddon, Beckenham, Kent.

O.M. BOYD-WALLIS, Albert W., Brentwood, Essex.

O.M. BRIGHTMAN, FRANK, Aspley House, Broadstairs, Kent.

1901 BROWN, JOHN HENRY, M.D., 14, Burngreave Road, Sheffield.

O.M. BROWNE, HABLOT J. M., M.B., Hoylake, Cheshire.

1901 BRYANT, JOHN HENRY, M.D., Asst. Physician Guy's Hospital ; 8, Mansfield Street, W.

1901 BURGESS, WILLIAM MILNER, 43, Nicoll Road, Harlesden, N.W.

O.M. BURGHARD, FRED FRANCOIS, M.S., Surgeon King's College Hospital and Paddington Green Children's Hospital ; 86, Harley Street, W.

1901 BURT, ALBERT HAMILTON, 34, Montpelier Road, Brighton.

O.M. BURTON, CHARLES GEORGE, 97, Chatswood Road, Clapton, N.E.

*Elected*

1901 CAMPBELL, ROBERT, M.B., Senior Surgeon Belfast Hospital for Sick Children; 63, Great Victoria Street, Belfast.

O.M. CARMICHAEL, JAMES, M.D., Consulting Physician Royal Edinburgh Hospital for Sick Children; 22, Northumberland Street, Edinburgh. (C.)

O.M. CARPENTER, GEORGE, M.D., Physician Evelina Hospital for Sick Children; 12, Welbeck Street, W. (C. 1900-1901) (S.)

O.M. CARRE-SMITH, HERBERT L., 74, Holland Park Avenue, Holland Park, W.

1900 CATHCART, GEORGE C., M.B., 35, Harley Street, W.

O.M. CAUTLEY, EDMUND, M.D., Physician Belgrave Hospital for Children; Asst. Physician Metropolitan Hospital; 15, Upper Brook Street, W. (C.)\*

O.M. CHAFFEY, WAYLAND C., M.D., Physician Royal Alexandra Hospital for Children, Brighton; 18, Palmeira Square, Hove, Sussex. (C.)

1901 CHALDECOTT, JOHN HENRY, Anæsthetist St. John's Hospital for Diseases of the Skin; 2, Lancaster Road, Hampstead, N.W.

O.M. CHAPMAN, CHARLES WILLIAM, M.D., Physician Hospital for Diseases of Heart, Soho Square; 21, Weymouth Street, W.

1901 CHEYNE, WILLIAM WATSON, C.M., F.R.S., Surgeon King's College Hospital, and Paddington Green Children's Hospital; 75, Harley Street, W. (C.)

O.M. CHUBB, WILLIAM L., M.D., Darenth House, Sandgate.

O.M. CLARKE, ERNEST, M.D., Surgeon Central London Ophthalmic Hospital; Ophthalmic Surgeon Miller Hospital; 3, Chandos Street, Cavendish Square, W.

O.M. CLARKE, JAMES JACKSON, M.B., Surgeon Out-patients City Orthop. and North-West London Hospitals; 18, Portland Place, W.

1901 COGHLAN, EDWARD FRANCIS, Evelina Hospital for Sick Children.

1901 COLLIER, MARK PURCELL MAYO, M.S., Senior Asst. Surgeon North-West London Hospital; Consulting Surgeon National Hospital for Diseases of Nervous System; 133, Harley Street, W.

*Elected*

1901 COOMBE, CHARLES F., Surgeon Children's Hospital, Sheffield ; 459, Crookes Moor Road, Sheffield.

1901 CORNER, HARRY, M.D., Brook House, Southgate, N.

1901 COX, JOSHUA J., M.D., 38, Deansgate, Manchester.

1901 CROSSLEY, LEONARD, M.B., Beechwood, Arnside, Carnforth, Lancashire.

O.M. CUMMINS, WILLIAM EDWARD ASHLEY, M.D., Surgeon County and City of Cork Hospital for Women and Children ; 17, St. Patrick's Place, Cork.

1901 DAWNAY, ARCHIBALD HUGH PAYAN, Anæsthetist Royal Orthop. Hospital ; 48, St. Mary Abbots Terrace, Kensington, W.

O.M. DEAS, FRANK, Thorndale, Merton Park, S.W.

O.M. DENT, CLINTON T., M.C., Surgeon St. George's Hospital and Belgrave Hospital for Children ; 61, Brook Street, W.

1901 DIXON, R. HALSTEAD, M.B., 3, Florence Terrace, Ealing Common, W.

O.M. DOCKRELL, MORGAN, M.D., Physician St. John's Hospital for Diseases of Skin ; 9, Cavendish Square, W.

1901 DODD, ARTHUR HERBERT, 49, Church Road, Hove, Sussex.

O.M. DOWNES, ARTHUR, M.D., Local Government Board Inspector ; 46, Gordon Square, W.C. (C. 1900-1901.)

O.M. DREW, DOUGLAS, B.S., Surgeon North-Eastern Hospital for Children, and Hospital for Women, Soho Square ; 49, Devonshire Street, W.

1901 DUN, ROBERT CRAIG, M.B., Surgeon Liverpool Infirmary for Children ; 6, Rodney Street, Liverpool.

1901 DUNN, W. J. ROBERTSON, 46, Wellington Terrace, West Derby Road, Liverpool.

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REPORTS  
OF  
THE SOCIETY  
FOR THE  
STUDY OF DISEASE IN CHILDREN.

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SESSION OF 1900-1901.

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1. A CASE IN WHICH THE RECTUM TERMINATED  
IN THE VAGINA.

By R. CLEMENT LUCAS, B.S.

A. T.—, a female infant aged 6 months, was admitted into Guy's Hospital on October the 1st, 1900, on account of a deformity caused by an imperforate anus, and the ending of the rectum in the posterior part of the vagina.

The infant was the third child of healthy parents, and no deformity of any kind had occurred in any other member of the family. The defect was not detected until the child was four months old. On a careful examination being made under chloroform, it was found that the aperture by which the faeces escaped was about the size of a crow's quill, and that its position was between the hymen and the fourchette, on the posterior aspect of the orifice of the vagina.

There was no depression to indicate the normal site of the anus. A probe passed into the aperture could be carried back about three quarters of an inch over the normal site of the anus.

Mr. Lucas proposed first to establish a permanent anus in the normal site by cutting down on the end of the

rectum, and stitching the mucous membrane to the edges of the wound. Subsequently he hoped to close the vaginal aperture by means of a plastic operation.

The explanation of this condition probably is that the *proctodænum*, or anal invagination of the epiblast intended to form the cloaca, missed the hind-gut or rectum, and reached only the urogenital ducts, and that subsequently the rectum burst through the point of least resistance into the vagina.

A water-colour drawing of the deformity was shown as well as the infant.    (*Exhibited October the 19th, 1900.*)

### Discussion.

**Mr. Tubby** said he had had a similar case under his care at the Evelina Hospital for some months past, upon which he had operated twice. At the first operation he passed a probe through the vaginal opening into the rectum at its termination, cut down into the rectum from the skin, and attempted to draw down the mucous membrane and fix it. He believed he did not draw down enough to fix it efficiently, and contraction and partial closure took place. At the second operation he drew down a good deal of mucous membrane, with a successful result. Very little, if any, faeces passed *per vaginam* and there was a good passage at the normal spot, and evidence of efficient sphincteric action. The child was a year old. He had not yet done the plastic operation to close the recto-vaginal fistula.

**Mr. Clement Lucas**, in reply, said Mr. Tubby had evidently carried out in his case the procedure he (Mr. Lucas) had just outlined as his intention. His object would be to get the mucous membrane down, and he hoped to find a perfect sphincter there. The mucous membrane being carried down and fixed to the margin of the skin, he imagined that perfect sphincteric action would follow, and there would only remain the closure of the small aperture in the vagina.

### Sequel.

When the case was shown before the Society Mr. Lucas stated that it was his intention to operate for the formation of an anus in the normal position, and subsequently to close the communication with the vagina. On October the 23rd, 1900, the operation was performed as follows:—A bulbous bladder sound was introduced through the aper-

ture in the vagina and made to project towards the perinæum. An incision one inch in length, commencing three quarters of an inch behind the vulva, was next made over the projecting sound. Distinct sphincteric fibres were met with in dissecting down. These were separated to the sides, when the end of the rectum appeared as a white body. The coats of the rectum having been divided, the sound projected through. The aperture was enlarged sufficiently to admit the forefinger. Great care was then taken to get hold of the mucous membrane of the rectum and bring it down to the edge of the skin. A series of salmon-gut sutures were put in through the skin, the coats of the bowel, and the mucous membrane. Three of these sutures were used on either side, and a triangular suture to bring the mucous membrane into the angles of the incision at either end. One suture was used to close the posterior part of the skin incision. No rise of temperature followed the operation, and the patient progressed well. To keep the artificial anus dilated, and to avoid contraction, the finger was passed daily for three months.

On February the 20th, 1901, the patient looked strong and healthy. The anus keeps well patent without any aid by the finger. Only occasionally a little fluid fæces passes *per vaginam*.

On April the 22nd, 1901, the child was examined again, and the anus found to be acting well. A distinct sphincter could be felt contracting when the finger was introduced into the artificially made anus.

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## 2. A CASE OF MONGOLIAN IMBECILITY.

BY JAMES TAYLOR, M.D.

DR. TAYLOR said the patient was a boy aged 5 years, and was an example of what had been described as Mongolian

imbecility on account of the features closely resembling the Mongolian type. The child had a short head, somewhat compressed antero-posteriorly, also the epicanthal folds and the mental peculiarities usually associated with this condition. It had a very placid temper, and this had been so all through its life. The child had much more intelligence than was usual in such cases, and there were none of the deformities in the limbs which were often described. In a paper which Dr. George Sutherland published recently, a peculiar deformity of the small finger was described, but this feature was not present in this case. The patient, however, had a curious power of over-extension of the fingers, and, indeed, at all the joints, so that they could almost be made to touch the back of the hand. There was suggestive evidence that there might be congenital syphilis as the cause of the condition, as was suspected in many other such cases. The child was one of three in the family; the next oldest was eleven years, and two had died between the patient and the older child. In addition there were two miscarriages immediately preceding the birth of the present child.

(*Exhibited October the 19th, 1900.*)

### Discussion.

**Dr. Fletcher Beach** said his reason for asking Dr. Taylor about treatment was that in his (Dr. Beach's) experience thyroid extract was of no use in Mongolian imbecility. Some years ago, during his absence from hospital, a case was taken in under the belief that it was one of cretinism. When he arrived he saw that it was a case of Mongolian imbecility. Thyroid had been administered, and he thought he would continue it to see the result. Five-grain tabloids were given three times a day for twelve months, but there was not the slightest alteration. It was interesting to know that there was a history of syphilis in Dr. Taylor's case. His own experience was that syphilis only accounted for 1 per cent. of such cases, so that if syphilis was the cause here it was very interesting.

**Dr. Shuttleworth** (Richmond, Surrey) said the thyroid treatment had been rather extensively tried on cases of Mongolian imbecility at the Royal Albert Asylum, Lancaster. His successor there, Dr. Telford Smith, treated a great many such children in

that way, and about 5 per cent. of the children in that institution were of that type. Though it was found to impart added vivacity, the effect was not anything like so marked as in cases of cretinism. He had himself continued this treatment in cases of Mongolian imbecility for six, eight, and twelve months, and then stopped it because of the absence of beneficial results. The present was a very typical example of the condition, and the tongue had the usual deeply marked fissures across it, due to the hypertrophy of the fungiform papillæ. Generally there was a rougher skin than in the present case ("furfuraceous," as Seguin long ago described it). The degree of imbecility varied greatly in these cases; in some there was a great degradation of intelligence, while other cases approached the borderland, and the latter could, by proper training, be made to pass muster in society. He knew one or two young men, in circumstances beyond the need of their earning a living, who came under that heading, but who passed muster fairly well. A shortening of the little finger with lateral displacement of the terminal phalanx (so as to curve towards the ring finger) had been remarked on by Dr. Taylor, and he thought Dr. Telford Smith, of the Royal Albert Asylum, was the first to draw attention to this peculiarity, having pointed it out in 'Pediatrics' in 1896. He (Dr. Shuttleworth) had since observed it in a large number of the children of Mongol type brought to him for admission to the special schools of the London School Board. The distal phalanx was set at an angle pointing towards the next finger. He did not know how this peculiarity was to be accounted for. His own idea of the *aetiology* of these children was that they represented permanently a *fœtal* stage of development, *i. e.* that they came into the world unfinished, and remained so, more or less, all their lives. A six-months *fœtus* seemed much more like a Mongolian imbecile than the latter was like a normal child. The question of the frequency of syphilis as a factor in the condition was an interesting one to him, because his experience coincided with Dr. Beach's that it did not figure largely in asylum cases. He believed he was correct in stating that about 40 per cent. of such children were the latest members of large families; *i. e.* there were perhaps seven or eight or more healthy children in the family; then an interval possibly of some years; then—at perhaps nearly fifty years of age—the mother made a last effort and it turned out a failure. Anything, however, which depressed the procreative powers of the mother might conceivably be a causal factor in the production of such imbeciles. He did not think insane or nervous heredity was so large a factor in these cases as in other types. There was frequently a family history of phthisis, and these cases usually had a tendency to phthisis as they grew up, and the

cause of death in many of those who died young was some form of tuberculous disease. They had poor circulations and general lack of "tone." A few of the more intelligent cases did remarkably well under appropriate training. Not long ago a girl of this type, after being in one of the special classes of the School Board for two years, was able to go into the ordinary school. But in the majority of these children one could not expect much improvement from education; they were simply imitative and mechanical, and seemed incapable of origination of ideas, consequently remaining more or less infantile all their days.

**Dr. James Taylor**, in reply, said he was well aware that thyroid had failed in many of these cases, but he thought there would be no harm in giving it another trial. He was surprised at what Dr. Fletcher Beach said about syphilis in such cases, because in twenty-five cases collected by Dr. Sutherland congenital syphilis was definitely present in eleven, and it seemed very strange that two such accurate observers should differ so materially in their statistics. Dr. Beach said in 1 per cent. there were evidences of syphilis, while in Dr. Sutherland's the figure was nearly 50 per cent. Regarding Dr. Shuttleworth's statement that these children were the last of a large family, he did not think that was quite correct; the Mongolian imbecile was not uncommonly the first child in the family.

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### 3. A CASE OF UNILATERAL CONGENITAL ANTERIOR DISLOCATION OF THE HIP.

BY A. H. TUBBY, M.S.

DOLLY L—, aged 6 years, was admitted to the Evelina Hospital for Children on February the 2nd, 1900. The birth was normal and the presentation was vertical. Nothing wrong was noticed with the child until she was a year old and began to walk, and then a limp was apparent, the right leg evidently being short. She remained under the supervision of a medical man until the last few months.

The limp has now become more decided. At no time has she complained of any pain.

On admission the child was healthy, and walked with a decided limp on the right side. The right lower extremity is one inch shorter than its fellow, less developed muscularly, and everted. The movements of the hip-joint are free, except abduction, and they are painless. The top of the great trochanter is one inch above Nélaton's line, and cannot be drawn down to its normal position, although some vertical movement is obtainable. The head of the right femur can be distinctly felt lying out of its normal position, and situated posteriorly to the anterior superior iliac spine. The skiagrams show these changes well, and further demonstrate the curvature of the neck of the femur.

On February the 9th the adductors, the sartorius, and the tensor vaginae femoris tendons were divided, and an attempt was made to reduce the deformity by forcible extension of the limb with subsequent flexion at the hip and knee joints, rotation and circumduction inwards and extension. A distinct click was felt and heard, and the position of the limb was improved. The limb was then fixed with a plaster-of-Paris spica bandage applied below the knee. The child was sent home. She was readmitted on August the 4th, 1901, and it was then found that the condition had relapsed. At present she awaits further treatment.

Mr. Tubby said he did not think that at the age of six years one could be certain of replacing the head of the femur into the socket or over its site; indeed, there was often no socket at this age. He believed that after four years of age the treatment of Lorenz by manipulating the head of the bone into place was of comparatively little avail, unless the cases were exceptional. With every year the prognosis of such cases became worse, so far as restitution was concerned. It was good up to four years, but became doubtful and bad later. He would be a bold man who did the open operation for the condition, and even if

attempted he did not think there would be much success, as nearly all attempts to form a new acetabulum had failed, and the after results were often bad.

(*Exhibited October the 19th, 1900.*)

### Discussion.

**Mr. Jackson Clarke** exhibited some skiagrams of similar conditions. One was of a patient aged about two years, with double congenital dislocation, whom he showed at a meeting of the North-West London Clinical Society two years ago. Since then he had had her in the North-West London Hospital and treated her on the method referred to by Mr. Tubby. She was now practically cured, and had been walking about for twelve months. He thought it should be more widely known that these cases were curable up to a certain age; and he agreed with Mr. Tubby that the limit age was about four years. He showed skiagrams of a second case of double dislocation of the hip. One side had been treated, and the head of the thigh-bone was seen to be in its place on one side but not on the other. That child was troubled very much with fits, and the plaster apparatus put on seemed to increase the frequency of the fits, so it had to be taken off. When the child was well enough Mr. Clarke repeated the operation, but on the other side. He showed a skiagram proving that the dislocation had recurred on the side operated upon previously, whilst it had been reduced on the side last treated. Some cases of congenital dislocation were not as badly off as others, and the cases least troubled by the deformity were those such as Mr. Tubby had shown, where the head of the thigh-bone was turned forwards. But later in life the majority of untreated cases were grievously crippled by lordosis and pain in the back, and a deplorable gait and carriage. Their ideas changed from year to year. Only a few years ago he read a paper by Mr. Tubby on the open operation, but that was now a thing of the past. He (Mr. Clarke) showed a skiagram of a child who had had the open operation for congenital dislocation, but there was no dislocation at all; it was a case of congenital paraplegia. Another condition which came for diagnosis was coxa vara, of which he showed the skiagram of a marked case. It was that of a girl of fourteen years, who fell down in the street and suffered from a partial separation of the epiphyses. He showed another skiagram of a case of total separation of the upper epiphysis of the femur in a girl also about fourteen years of age. That case was operated upon at the City Orthopædic Hospital by Mr.

Poland, who opened the joint and removed the epiphysis, with the result that the girl lost the pain and limp from which she had suffered for twelve months.

#### 4. A CASE OF CEPHALHÆMATOMA.

By A. H. TUBBY, M.S.

MAY B—, aged three months, was admitted to Westminster Hospital on the 2nd of October, 1900. Both parents were healthy, and this patient is the second child. There has been one miscarriage between the birth of the first child and the patient. The last labour was not protracted; the presentation was vertical, and no forceps were used.

The swelling on the child's head was not noticed at birth, but was seen a day or two afterwards. It was at first small in size, and gradually increased until it came under observation, and during the fortnight the child has been in the ward no perceptible alteration has taken place in the size of the swelling. The present condition of the child is good; she is fairly nourished, sleeps well, and is placid.

*Character of the swelling.*—On the right side of the child's head there is a large conical swelling, two and a half inches in diameter, regular in outline, rather more prominent posteriorly than to its outer aspect, but varying somewhat according to the position of the child. The growth of hair over the tumour is perhaps a little more scanty than on the opposite side, but there is no very marked difference. Free fluctuation can be obtained over the swelling, but no impulse can be transmitted from the anterior fontanelle. It is neither tender, hot, nor red, and the child does not resent manipulation. Attempts at transillumination have failed. The margin of the tumour

is raised, well marked, crateriform, and hard, where it merges with the skull. The base of the swelling corresponds roughly with the right parietal bone. The case is undoubtedly one of cephalhæmatoma; the only question is as to treatment. (*Exhibited October the 19th, 1900.*)

#### Discussion.

**Mr. Clement Lucas** said he agreed with Mr. Tubby's diagnosis, namely, that it was a case of cephalhæmatoma. He could press the edge of the swelling down with his thumb.

#### 5. EXTREME ADIPOSITY IN AN INFANT.

By G. A. SUTHERLAND, M.D.

DR. G. A. SUTHERLAND showed an infant presenting an extreme development of adipose tissue with rhachitis. At the age of seven months it weighed 28 lbs., and at the

FIG. 1.



present time (a month later)  $29\frac{1}{2}$  lbs. The child had been fed entirely on the breast, but without an observation of

any regular hours of feeding. Her general health had been good; there had been no gastro-intestinal disturbances; and although extremely fat she could sit up and move her limbs actively. There was no family history of lipomatosis, but two other children had also been stout as infants. The fat in this infant was diffused generally all over the body and extremities, and was soft and flabby. There was slight but definite thickening of the epiphyses of the long bones. Examination of the maternal milk showed the presence of 8.2 per cent. lactose, and of .44 per cent. proteids, and that the other constituents were normal. Dr. Sutherland thought the excessive adiposity in this patient was probably due to the amount of lactose in the milk, which being largely beyond the infant's requirements was simply transformed and stored as fat. At the same time the small amount of proteids was insufficient for nutrition, and general flabbiness resulted.

(October the 19th, 1900.)

### Discussion.

**The Chairman (Dr. Sansom)** thought that neither the aspect of the child nor its surroundings suggested nerve trouble; there was evidently no adiposis neurotica. The child had a placid, healthy expression. Dr. Sutherland's idea seemed a very feasible one, and it was remarkable that the mother's milk contained such a large proportion of lactose; he supposed there had been sufficiently repeated analyses to establish that fact. He thought they arrived at the opinion that there was nothing wrong with the health of the child mainly by the process of exclusion.

**Dr. Cautley** asked what sample of the mother's milk was analysed. If the percentage of lactose and fat was so great throughout, he thought that accounted for the condition of the baby; but it would be interesting to hear whether the child was given anything besides its mother's milk. He had seen a baby which weighed  $27\frac{1}{2}$  lbs. at six months, but the parents had been in the habit of giving it various other articles of food in addition to the breast milk.

**Dr. Chaffey** (Brighton) said he thought it was a case of simple increase of fat, not one of lipomatosis, which at first he thought it might be. Cases of lipomatosis had been fairly normal children at birth, and then a few months afterwards fat began to appear in various parts, usually about the flanks, and there were peculiar

fatty tumours about the axillæ, and subcutaneous fat, somewhat similar to those found in myxœdema, to which disease he thought lipomatosis was much allied.

**Dr. Sutherland**, in reply, said he did not regard the case as one of lipomatosis, at least in the pathological sense, but as one of sugar fat, owing to the excessive amount of lactose in the mother's milk. He would have liked opinions as to whether the child was rickety. In reply to Dr. Cautley he said four ounces of the breast milk had been drawn off for analysis by Dr. Pakes, of Guy's Hospital; it was morning milk, but he did not know whether it was before or after feeding. He had cross-questioned the mother, and felt satisfied that no other food than breast milk had been given.

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#### 6. MYXŒDEMA ASSOCIATED WITH ECTROPIUM IN A GIRL TWELVE YEARS OF AGE.

By SYDNEY STEPHENSON, C.M.

ALICE W—, aged 12 years, was seen on September the 26th, 1900.

The skin over the cheeks, nose, upper lip, and eyelids is pinkish and swollen, so that the features are coarse and ill-defined, and the lines of expression obliterated, especially upon the left side of the face. The swelling is firm, and does not pit upon pressure. Around the eyelids, particularly of the left eye, the skin is dry, rough, and covered with fine, branny scales. There is no general œdema of the body. The hair is well nourished, but the nails are stated to be brittle. Her hands and feet are rather "pudgy." The height is 50½ inches, the weight 69½ lbs. She is rather dull mentally, and good-tempered on the whole, but tends to be suspicious of those about her. Her *speech and movements are markedly slow and deliberate*. She is sensitive to cold.

The eyelashes of each upper lid are scanty and misshapen, and the corresponding intermarginal spaces are red and glazed. The lower lid and the punctum lacrymale of the

right eye are slightly everted. The punctum of the left lower lid is also everted. The upper lids are so short that when an effort is made "to shut the eyes" the lower part of the scleral conjunctiva of each globe remains exposed. This shortening amounts in the right eye to 3 mm., and in the left eye to 1.5 mm. The pupils react somewhat sluggishly to light.

FIG. 2.



R. V. =  $\frac{6}{12}$  ij No. 1 J. L. V. =  $\frac{6}{9}$  < No. 1 J.

Under atropine :—

$$\begin{cases} \text{R. V.} = < \frac{6}{6} - 2.0 \\ \text{L. V.} = \frac{6}{18} ij + 0.75 \end{cases} \quad \frac{180^\circ}{-3.0} = \frac{6}{12} ij.$$

Inspection of the fundus oculi reveals small physiological

cups. In the right eye there is a small scleral arc at the lower and outer part of the optic disc. A small spot of black pigment lies in the inner hemisphere of the fundus, about midway between the optic papilla and the visible periphery of the fundus. It is probably of congenital origin.

*Thyroid gland.*—The isthmus can be plainly felt.

The *lungs, heart, spleen, liver*, and palpable lymphatic glands are normal.

The *ears and larynx* are normal. The *fauces and palate* are normal, but the *uvula* may be a little œdematosus.

The *urine* is of sp. gr. 1024, faintly acid, with phosphates, and contains neither albumen nor sugar.

*Catamenia.*—Although the child shows some evidence of puberty as regards the breasts, etc., yet the menses have not so far made their appearance.

The *temperature* is 98.2° F., the *respirations* 19 to the minute, and the *pulse* 80 to the minute.

Her *bowels* tend to be costive.

Mr. Stephenson pointed out that when the patient closed her eyes the lids did not meet; and it might be that the blepharitis and eversion of the lid depended upon this. He had delayed treatment until he had obtained the opinions of members. If they agreed, he proposed to put her upon thyroid extract. (Exhibited October the 19th, 1900.)

### Discussion.

In connection with Mr. Stephenson's case, **Dr. Lewis** (Folkestone) showed photographs of cases of myxoœdema in young subjects. The first was a girl who had been in school a year without having acquired a new fact, though she was thirteen years old. After treatment with thyroid she lost a stone in weight and rose to the top of the class in that term. In another case the girl came under treatment because the catamenia did not appear. His father had treated her while he lived, and at his death the girl came under his (Dr. Lewis's) care. He put her upon thyroid, the catamenia occurred, she lost weight, and some baldness which she had was cured. She was now twenty-four years old and apparently quite well.

**Dr. Penrose** asked whether the remarkable redness in the upper part of the cheeks beneath the eyes was a constant sym-

ptom in this case. He hoped that Mr. Stephenson would bring the case forward again after the thyroid extract treatment had had a trial.

**Dr. Sutherland** asked whether there was any albumen in the urine. He thought the œdema was so localised around the eyes as to suggest a different disease from myxœdema.

**Dr. Theodore Fisher** (Bristol) said he remembered a case of intermittent albuminuria which appeared very much like this. The boy was mentally dull, apathetic, and lethargic.

**Mr. Sydney Stephenson**, in reply to Dr. Penrose, said that as the lower lids were slightly everted the eyes were continually shedding moisture, and that probably accounted for the curious condition of the skin about the eyelids, particularly the lower. That was proved by the fact that the redness was worse on the side where lacrymation was greatest. He hoped to bring the case up again after thyroid had been tried. In reply to Dr. Sutherland, the urine had been tested seven or eight times; the specific gravity was never more than 1022 nor below 1018, it was always slightly acid; there was neither albumen nor sugar, and only on one occasion were phosphates present. The last examination was made that day. That reply would also answer Dr. Theodore Fisher. Moreover slowness of speech, stodginess of hands, and puffy features were hardly characteristic of intermittent albuminuria.

*Postscript* (August the 16th, 1901).—Since October the 13th, 1900, the patient has taken (with intermissions) no less than 657 tabloids of thyroid extract, each containing 5 grains (Burroughs Wellcome and Co.). The mixed urine of the twenty-four hours has been examined on seventy-nine occasions, but albumen has never been found. The lowest bodily temperature during the period named has been 97.6° F., and the highest 99° F. The patient's weight is now 80 lbs., and her height is 52½ inches. Her face is still puffy, especially round the eyelids. Mentation is still rather slow. Her general health seems to be good. Menstruation has not yet appeared.

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## 7. A CASE OF SYPHILITIC EPIPHYSITIS.

By GEORGE CARPENTER, M.D.

DR. GEORGE CARPENTER showed a case of pseudo-paralysis of both upper extremities in an anæmic infant, 7 weeks old, who "snuffled" loudly. The condition had been noticed only some three or four days, and was a painful one, for the infant cried when it was handled. She could move the fingers of either hand, but other parts of the limbs hung motionless. Her mother stated that three of her children had been born dead. There was nothing worthy of remark about her three living children. The cutaneous manifestations in the child were trifling and not characteristic. They consisted of a few scurfy patches on the legs, together with some isolated crusted superficial sores. Similar lesions were found on the head, and there were a few scattered scaly papules on the face. The right wrist was obviously enlarged, periosteal thickening extending some little distance up the shafts of the ulna and radius, which distinguished it from a rickety lesion. The humerus was thickened above the elbow-joint, as also about the shoulder-joint. The left wrist was not quite so large as the right, nor was the humerus about the elbow-joint so much involved as on the right side, and there was some doubt as to the condition of the epiphysis at the corresponding shoulder. The condition was typical of syphilitic epiphysitis. She could kick her legs freely enough, and no abnormalities were detected in the bones of the lower extremities. Her organs were natural. An X-ray photograph was taken of the case, but failed to demonstrate the obvious changes at the epiphyses.

*(Exhibited October the 19th, 1900.)*

## 8. A CASE OF POLYURIA IN A CHILD AGED THREE YEARS.

By J. H. SEQUEIRA, M.D.

ALBERT H—was admitted to the North-Eastern Hospital for Children under the care of Dr. Sequeira on April the 30th, 1900. He was then two years and ten months old. The family history presented nothing of importance. The patient was brought up at the breast until he was fourteen months old, and since then he had been fed upon Nestlé's milk and beef tea. At the age of eight months he had whooping-cough, and since then the mother had noticed that the child suffered from excessive thirst and increased frequency of micturition. There was no history of injury.

On admission to the hospital the patient was an ill-nourished child, weighing sixteen and three-quarter pounds. The skin was pale except upon the cheeks, where there was a red flush. To the touch the skin was unusually dry. There were evident signs of rickets in the shape of the head, and in the enlarged epiphyses of the long bones. The temperature was normal, and there were no signs of disease of the abdominal or thoracic organs.

The urine was pale, of specific gravity 1010, the reaction alkaline. There was a faint trace of albumen, and at times this reached one per cent. There was no deposit and no casts. The quantity of urine passed per diem varied from nineteen to forty ounces, and besides this, some could not be measured.

The amount of fluid taken daily was measured, and was found to vary from twenty to forty ounces. No restriction was placed upon the amount the child drank. For some weeks the child was out of hospital, and he was readmitted upon May the 30th. The urine presented the same characters. Its reaction was still alkaline, and there was

a small quantity of albumen from time to time. On two or three occasions the temperature, which had usually been normal, rose to 100° F.

Owing to an outbreak of infectious disease the ward was closed, and the child again became an out-patient; but as he appeared to be steadily wasting he was readmitted on September the 26th, 1900.

Constipation was now a prominent feature, the abdomen was somewhat distended, and scybalous masses were felt through the parietes in the sigmoid region. These disappeared after free purgation. The urine was of specific gravity 1005; it was still alkaline. There was no albumen, no sugar, and no excess of phosphates. The quantity passed per diem varied from twenty-six to forty-seven ounces, the average being thirty-six ounces. The amount of urea passed varied from forty-eight to seventy-two grains a day.

With a view to making the urine acid, the acid phosphate of sodium in five-grain doses was administered three times a day, as advised by Dr. Robert Hutchison. At the end of six days the urine was found to be acid; on one occasion (October the 15th) one specimen was alkaline, while the rest were acid. (I regret that no note was made at the time as to the relationship of the alkaline urine to the food or drug taken.)

The retinae were examined, and were found to be healthy. The pulse was somewhat frequent, but the tension was not raised.

The child slowly but steadily lost weight—one pound and a quarter since the 30th of May.

The case presents several points of considerable interest. The history shows that apparently as a result of an attack of whooping-cough when eight months old, the patient has constantly passed what must be considered, for his age, enormous quantities of pale urine of low specific gravity. The average quantity excreted by a child of three years is, according to Dr. Still, eight ounces a day. In this case the average of a long series of observations was thirty-six

ounces, and on one occasion as much as forty-seven ounces were passed. Such a condition is probably best explained by supposing a chronic dilatation of the renal arteries, and on that ground the case should probably be called one of diabetes insipidus. Diabetes insipidus is a rare disease, but it is relatively common in the young. It has been met with as a congenital condition, and in the eighty-five cases collected by Straus no fewer than nine were children under five years of age.

There is, however, a difficulty in placing the case in this category, as the urine, unless influenced by drugs, was always alkaline, and from time to time there has been albumen present, although in small quantity. There have been no casts and no pus, so that there is no evidence of structural changes in the kidney itself or in the pelvis of the kidney.

*(Exhibited October the 19th, 1900.)*

### Discussion.

**Dr. Lewis** (Folkestone) said he had been working at an allied subject, namely, bed-wetting by children, and an article would appear on the question in 'King's College Hospital Reports' for December. He contended that bed-wetting was due to polyuria, and was a weak bodily condition associated with the ingestion of starchy foods. It could be stopped at once by an anti-diabetic diet. Part of the treatment was to cut off the starchy elements of the food after breakfast-time and give very little carbohydrate. Tea should consist of gluten bread, or egg, or ham, and at night milk or bovril should be given. He did not think it was necessary to limit the amount of liquid taken. It seemed absurd to treat such cases by circumcision or cauterisation of the neck of the bladder. He thought the present case really belonged to that category.

**The Chairman (Dr. Sansom)** said he agreed with the diagnosis, and the case was a very valuable one. Dr. Lewis's observations also were very important, and one would like to hear them criticised. On behalf of the Society he thanked all who had contributed to their instruction at that meeting.

**Dr. Sequeira**, in answer to Dr. Lewis's question, replied that there had been no excess of starchy food administered while the child was in hospital, and did not think that the case could be classed with those he mentioned.

*Sequel.*

The child remained in very much the same condition for several months, steadily losing weight. The urine was of the same character, and contained a little albumen. By centrifugalising a small deposit was obtained, which was found to contain a very few granular casts. The child at last became comatose, and died from what appeared to be uraemia.

At the autopsy the kidneys were large and granular, showing cirrhotic changes on microscopical examination. There was some hypertrophy of the left ventricle. The other organs were normal.

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#### 9. A SPECIMEN ILLUSTRATING RHEUMATIC DILATATION OF THE HEART.

BY THEODORE FISHER, M.D.

THE dilated heart occurred in a youth aged 19 years, who died, one year after an attack of rheumatism, from cardiac failure. There was no disease of any of the valves, and the pericardium was only adherent over a small area, about two inches square, near the apex of the left ventricle. At death the heart measured six inches laterally. The organ was hypertrophied as well as dilated; it weighed nineteen and a half ounces.

He recently had another case, in a child aged 11 years, who attended the out-patient department at the Bristol Children's Hospital, and was admitted to the wards. Over most of the prominent bony points throughout the body, and along several of the tendons, rheumatic nodules were present. Death occurred six weeks after admission, from acute pericarditis. In that case also there was almost entire absence of valvular disease, only slight thickening of the mitral valve being present, and the pericardial adhesions were all

quite recent. This heart was not only dilated but hypertrophied. It weighed eleven and a quarter ounces.\*

(*Exhibited October the 19th, 1900.*)

### Discussion.

**Dr. George Carpenter** asked if Dr. Fisher could supply information as to the condition of the muscular fibres, and as to whether there was any myocarditis. He had examined similar specimens free from valvular disease microscopically, and found extensive myocarditis. The cases were published in 'Pediatrics' in 1896.

**Dr. Sequeira** said Dr. Fisher had made a point about the absence of adhesions in the pericardium. In the course of a research which he (Dr. Sequeira) conducted while Registrar at the London Hospital he inquired into the relationship of adhesions to dilatation of the heart. A large number of the cases of adherent pericardium had a very dilated heart; but there were other cases in which the adhesions were extensive but the heart was not large. He would rather lay stress on the *condition* of the pericardium in those cases; it was inflamed and softened, and its natural support to the right side of the heart had been lost, for the normal fibrous pericardium was a firm, strong sac. When the whole pericardium was inflamed and softened it did not interpose that resistance to dilatation of the heart which was present in the healthy condition.

**Dr. Penrose** said that all the evidence he knew of on the subject was that resulting from the work of Dr. Poynton, whose experience was that there was generally some myocarditis present in cases of dilatation.

**Dr. Ewart**, who had not yet obtained a view of the specimen brought by Dr. Fisher, remarked on the general question, that he believed it was their Chairman, Dr. Sansom, who drew attention to the fact that the action of the valves and of the walls of the heart might suffer considerably from fibrosis developing at the base of the heart, such as might result from pericarditis, even when the latter did not lead to great effusion or adhesion. In a heart, the valves of which were already damaged, this additional influence might seriously aggravate the valvular defect, and might explain the dilatation. Those who had seen the specimen would perhaps say whether the valves were of sufficient size to close the orifice.

\* These cases were brought forward as illustrations from the post-mortem room of clinical cases of rheumatic dilatation of the heart, which were to have been shown by Dr. Lees. The second case was an illustration, not of dilatation, but of the rapid hypertrophy which takes place in pericarditis.

**The Chairman (Dr. Sansom)** said the subject was a most interesting one, and they hoped at a future meeting to have the cases announced by Dr. Lees. It might be well if some of the observations were reserved for that occasion, though he did not wish to interpose to shorten the present discussion. He would himself try to bring forward some evidence on the subject at a subsequent meeting.

**Dr. Theodore Fisher** (Bristol) in reply, said there was in his case a slight interstitial myocarditis, but not so much as might have been expected. In the other case there was considerable naked-eye evidence of recent degenerative change, but he had not yet cut microscopical sections. Professor Stanley Kent had taken cultures from the heart muscle, and had found a diplococcus resembling that recently described by Dr. Poynton and Dr. Paine.

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#### 10. IMPERFORATE ANUS ; RECTO-VAGINAL FISTULA ; FORMATION OF NEW ANUS.

By A. H. TUBBY, M.S.

E. D—, aged 5 months, was admitted to the Evelina Hospital on March the 9th, 1900. She was in most respects a healthy baby, but the motions issued from the vagina, and there was no anal orifice. No abdominal distension was evident, and the child did not suffer from vomiting.

On March the 14th under an anæsthetic the parts were examined. There was a fistula at the lower part of the vagina and just inside the hymen, which was circular in shape and had a large central aperture. The probe could be passed into what appeared to be the distal end of the rectal cul-de-sac. Using the tip of the probe as a guide, an antero-posterior incision was made on to its point through the skin and connective tissues, and the tip of the probe was encountered at the depth of a quarter to half an inch. On enlarging the incision in its deeper parts the rectal mucous membrane was exposed. This was freed and with difficulty brought down to the edges of the skin incision and sutured there. Silkworm-gut sutures were used. A large rubber drainage-tube was inserted into the

new orifice. After the operation the child became troubled with diarrhœa, the sutures gave way, and the orifice contracted, so that only a probe could be passed when the child was brought again to the hospital on June the 1st.

The operation was repeated on June the 3rd, and much care was taken in bringing down the mucous membrane of the rectum to the skin margin. It was anchored there by over twenty sutures, and it held firmly during the process of healing. The opening was kept dilated by means of a small Ferguson's speculum, and since the child was discharged from the hospital on August the 2nd the mother has kept the anus patent by passing her finger once daily. Nearly all the faeces issued by the anus, and scarcely any by the vagina. No attempt has hitherto been made to close the vaginal fistula.

(*Exhibited November the 16th, 1900.*)

### Discussion.

**The Chairman (Mr. Clement Lucas)** asked where the actual aperture was situated; was it high up? Also was it within or without the hymen? In the case which he (Mr. Lucas) exhibited last time, the aperture was between the hymen and the fourchette. He performed the same operation as Mr. Tubby had described, bringing the mucous membrane well down, and it showed clearly at the margins now healed.

**Mr. D'Arcy Power** said that he had recently had a similar case under his care, in which he had not been so successful. The fistula was a very small one situated high up on the posterior wall of the vagina in a girl aged one year. He had made a good-sized aperture between the anus and the end of the cul-de-sac, bringing down the mucous membrane and closing the fistula after its edges had been pared. This was done on two or three occasions, but each time the sutures cut their way out, the new anus contracted in spite of all attempts to keep it dilated, and the faeces continued to pass through the fistula. Mr. Power wished to ask Mr. Tubby how he had managed to keep the anus open in this case. In reply to the Chairman (Mr. Clement Lucas) Mr. Power said that it was by no means easy to bring down the mucous membrane, for there was a considerable depth of tissue between the skin and the rectum at the place where the new anus was made, and the child, being only a year old, was much younger than the one shown by Mr. Tubby.

**Mr. Robinson** said he understood the opening, in Mr. Tubby's case, was above the hymen. He (Mr. Robinson) had seen many cases of imperforate anus, but never an opening above the hymen, always between the hymen and the fourchette.

**The Chairman (Mr. Clement Lucas)** said he was inclined to agree with what Mr. Robinson had said, namely, the higher up the aperture the rarer the case. In the Pathological Museum of Guy's Hospital was a specimen where the aperture was close to the uterus.

**Mr. Tubby**, in reply, said he passed a probe from the vagina into the rectum as a guide, then cut down on to the probe. The distance was about a quarter to one half of an inch. In reply to Mr. Lucas, Mr. Tubby said the aperture was within the hymen. It seemed to him that the whole question of success in these cases depended on how far towards the skin the mucous membrane in the rectum extended. In this case it was not more than half an inch from the skin. Where the mucous membrane ceased a couple of inches up, he thought it was almost impossible to form a useful anus through all the thick tissue, much of which ultimately became scar tissue. He used silkworm-gut sutures. He thought a great share of the credit in the case was due to Mr. Hicks, the Resident Medical Officer, who attended the child very carefully, while the mother had been very conscientious in daily keeping the orifice patent since the infant had left the hospital.

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## 11. ANGIOMATOUS TUMOUR EXTENDING UP THE SPERMATIC CORD.

By A. H. TUBBY, M.S.

A BOY, aged 5 years, was admitted in April, 1900, under the care of Mr. Tubby at the Evelina Hospital. Since the age of three months the boy had had right and left inguinal hernias, which had been treated by trusses. The left inguinal hernia (?) caused much trouble, and for this reason the pad of the truss on the left side had been made more prominent than usual. Five months previously to admission it was found that the swelling on the left side could not be reduced. During the last fortnight it had

become much larger, and the mother said that it varied in size from time to time.

On examination the boy appeared to be healthy, and both external rings could be defined by palpation, the left being the larger. There was a large firm mass the size of an orange filling up the left side of the scrotum and extending well up to the external ring. Internally and above, the margin was ill-defined, and reached to the root of the penis. The tumour had a peculiar tough elastic feel, without impulse and transparency. On its anterior surface were some peculiar convoluted markings, which were not so firm as the main portions of the swelling. They felt very much like large dilated veins. When steady pressure was maintained its size was much decreased, but the swelling soon returned to its original bulk when this was taken off. The testicle could be felt lying below the tumour and quite free from it.

On operating, some huge dilated veins presented themselves, which closely simulated congested small intestine both in size and colour. By careful dissection the external ring was found to be free from intestine and omentum. The testicle and the spermatic cord were then separated from the tumour, and a few vessels were ligatured at this stage; the main blood-supply of the mass was found to be supplied from the left corpus cavernosum. The wound healed by first intention.

On examination the tumour was found to consist of venous sinuses, connective tissue, and fat.

(*Exhibited November the 16th, 1900.*)

#### Discussion.

**Mr. Robinson** asked whether Mr. Tubby had any views on the causation and development of the tumour. He did not know whether it dissected easily off the spermatic cord, or whether Mr. Tubby thought it had any connection with the cord. Going back to early times, one recognised the large number of the Wolffian veins on the left side, the explanation given of subsequent varicocele on that side. Some time ago he (Mr. Robinson) removed an angioma from a girl's inguinal canal

on the left side. It was a very definite swelling, closely connected with the round ligament. It seemed to have a close relation to varicocele in the male.

**Mr. Tubby**, in reply, said the vascular connections with the spermatic cord were slight; the main connections were with the corpus spongiosum of the penis. It was mainly erectile tissue. He agreed with the light which Mr. Robinson had thrown upon it from the developmental point of view.

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## 12. MULTIPLE SUBCUTANEOUS FIBROUS NODULES IN AN INFANT APPARENTLY FREE FROM RHEUMATISM.

By GEORGE CARPENTER, M.D.

CHARLIE N—, aged 17 months, came under my care at the Evelina Hospital in September, 1898.

His hands, which were much crippled, presented numerous subcutaneous nodules arising from the extensor tendons over the knuckle-joints.

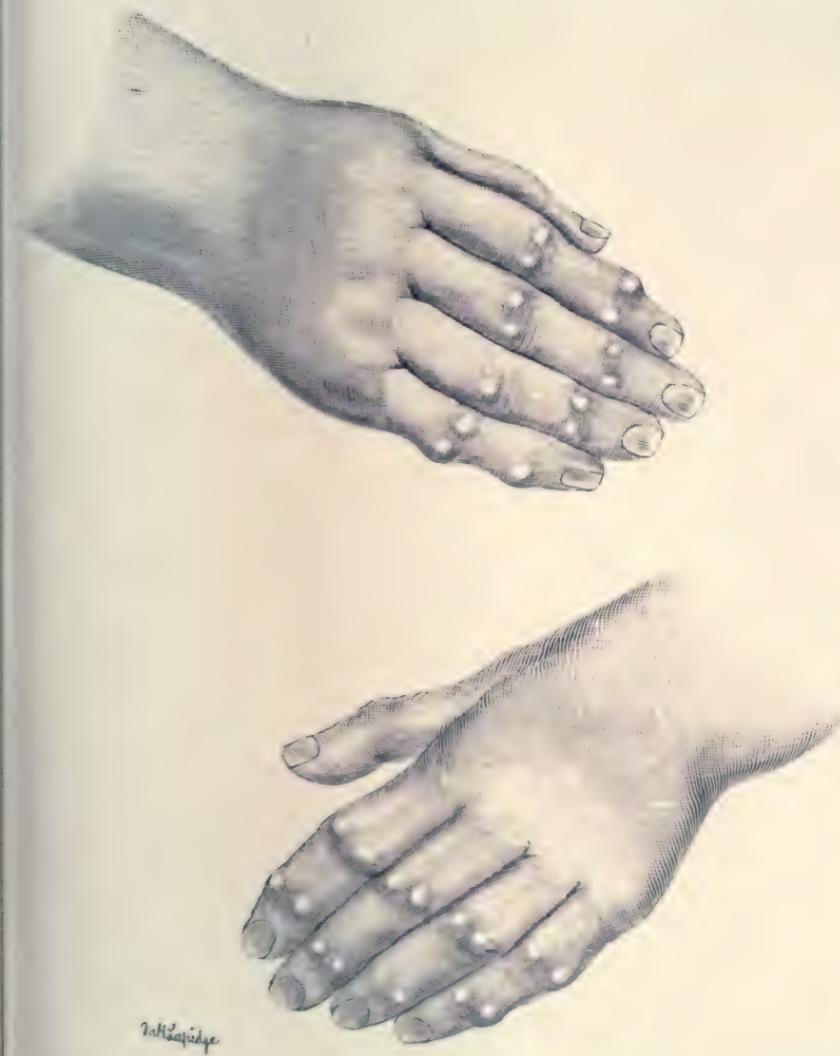
The drawing annexed faithfully portrays the appearance and situation of the nodules. The nodules were firmly anchored to the underlying extensor tendons, but the skin over them was freely moveable. The range of movements executed by the hands was extremely limited, and he could not feed himself or hold a cup or spoon with them. The knuckle-joints were quite natural, and the limitation of movement appeared to depend entirely on the stiffening occasioned by the nodular growths springing from the tendons overlying the joints. Attempts to straighten the fingers occasioned pain, and made him cry. A subcutaneous nodule was also found on the right great toe, and some nodules at the tendinous insertion of the occipital portion of the occipito-frontalis muscle.

The condition of the hands above described had been noticed for some three months, and it was for this that his mother sought advice, and not for his general health, concerning which she found no occasion for anxiety.



PLATE I.

Illustrating Dr. G. CARPENTER's case of Multiple Subcutaneous Fibrous Nodules in an Infant apparently free from Rheumatism.



Wartspidige



I found some enlargement of the liver and spleen, the latter being just in front of the costal margin, and the former two fingers' breadth below it in the nipple line. He was, perhaps, a trifle pale, but anaemia was not a feature of the case.

There was no history of rheumatism, personal or otherwise, and the child had not suffered from sore throat. There was no history or suspicion of syphilis. Apart from the abnormalities mentioned, nothing worthy of note was detected by a physical examination. He was at this time commencing to walk.

On October the 27th some fresh subcutaneous nodules were found on the right knee and ankle (anterior and inner aspects), the left ankle (anterior and inner aspects), on the right and left external malleoli, and on the backs of the metatarso-phalangeal joints of the great toes. The heart was natural on this date, as also on October the 13th. On November the 24th a nodule was found on the right foot. On December the 1st the nodules in the old situations were thought to be less prominent, but fresh nodules had arisen on the dorsum of the right foot. On December the 15th a nodule was detected on the outer side of the back of the right wrist.

When examined on January the 26th, 1899, his heart was found to be normal, and the liver and spleen unaltered. He was well nourished and not obviously pale. His mother thought that he could hold things better in his hands, but the nodules appeared to have increased in size, and one or two on the left hand were, comparatively speaking, very large. On the whole, the nodules seemed to be rather more numerous, but there had been no fresh developments elsewhere.

On March the 9th a nodule was removed from the second phalangeal joint of the index finger of the right hand under an anæsthetic. It was attached to the capsule of the joint, and on microscopical examination found to consist of fibro-nuclear tissue.

On April the 6th nodules were found at the insertions of

the abductor pollicis muscles of the feet, and a nodule over the pisiform bone on the left hand. There were several nodules on the extensor tendons over the fronts of the ankle-joints, and a nodule in the tendinous insertion at the outer border of each patella.

The spleen was still enlarged a trifle, the heart quite natural as before, and the anterior fontanelle sufficiently patent to admit the tip of the index finger.

On April the 20th there was a nodular swelling at the back of *each* wrist. His right hand was considered to be better, but the left was much about the same. There were some nodules on the left palm.

In July he was sent to the country for six weeks, and returned on August the 17th, when the nodules on the hand were thought to be improving, and it was said that he could open his fingers with greater ease and freedom. There was no heart murmur.

On January the 4th, 1900, his heart was still natural, and the nodules previously mentioned were in much the same condition as before.

He had been treated by drugs for many months in the shape of mercury, arsenic, iodide of potassium, salicylate of sodium, and tonics generally, without deriving the slightest benefit from their use. It was felt that some other method should be tried to enable the child to regain the use of his hands, which were in much the same condition as when he first came under my care.

Galvano-puncture was thought to be worthy of a trial before resorting to more radical measures. The child was placed under an anæsthetic. A partially insulated needle, such as that used for nævi, attached to the negative pole of the galvanic battery, was thrust into each little nodule, and a current of five cells passed through it for some thirty seconds. The electrode attached to the positive pole was placed in the palm of the hand. When he was next seen the nodules were certainly softer, and on January the 22nd the operation was repeated with seven cells. By January the 29th there was a distinct improvement. The nodules were

smaller, and the boy could use his hands, which before had been impossible. On this date eleven cells of the battery were applied. Nodules were noticed on both ears for the first time.

On June the 29th the hands had greatly improved. A fresh nodule was detected on the right ear. On July the 19th the nodules on the ears were larger. The nodular condition of the hands was thought to be still improving, and his mother expressed herself as being gratified with the result.

On October the 25th the situation of the nodules was as follows:—There was a nodule on the tendons at the back of the left wrist, and two nodules similarly placed at the back of the right; a nodule on the outer side of the lower end of the left radius, also the right, and one at the back of the lower end of the right ulna. On the right hand there were single nodules on the backs of the second, third, and fourth metacarpo-phalangeal joints, and single nodules at the backs of all the joints of the fingers and thumbs. The fingers could not be fully straightened. On the left hand there were single nodules on the backs of the first, fourth, and fifth metacarpo-phalangeal joints, one nodule at the back of the fourth and fifth middle phalangeal joints, and two nodules at the back of the second and third middle phalangeal joints. On the terminal joints there were a nodule each at the back of the fourth and fifth, three nodules at the back of the third, two nodules at the back of the second, and one nodule on the inner side of the last joint of the thumb.

On the right foot there was a nodule on the back of each joint of the little toe, also a nodule on the inner side of the first and the outer side of the fifth metatarso-phalangeal joints. On the left foot there were a nodule at the bend of the ankle, one on the inner side of the metatarso-phalangeal joint of the first toe, one on the outer border of the joint, one over each joint of the little toe, and one on the metatarso-phalangeal joint of the fifth. On the ears there were three nodules on the left helix at the top, and two nodules in the antihelix. On the right

ear there were three nodules in the antihelix, and several all round the helix. There was a single nodule in the tendinous insertion of the occipito-frontalis muscle on the right side behind it.

No perceptible changes were detected in the bones by the use of the X rays.

Subsequent to this last note two further galvanic applications were made to the nodules, and on November the 8th there was a note to the effect that he could extend all the fingers except the ring finger of the left hand.

During the two years or more that he has been under observation he has at no period developed symptoms at all suggestive of rheumatism, nor has his heart suffered in any way.

It will be noticed, if he can be induced to speak, that his voice is hoarse. This is stated to have been the case since birth. I have several times obtained a fleeting glance of the larynx. The vocal cords are pearly, and I did not notice any abnormalities, though I thought it possible from the dysphonia that he might have some fibrous nodules in that situation also.

Subcutaneous fibrous, so-called rheumatic, nodules normally appear and disappear within a few weeks, and rarely persist for months. They usually occur in the course of, or as a sequel to, rheumatism, and they are often associated with chronic heart disease, usually of a progressive nature.

The nodules in this case are of a fibrous nature, and in this respect are akin to rheumatic nodules; they have selected the situations common to rheumatic nodules, and, like rheumatic nodules, some of them have appeared and have vanished in due course. In other respects they are unlike rheumatic nodules. This child has apparently not been attacked by rheumatism; it has not suffered from carditis of even a mild type, as judged by the numerous physical examinations of the organ which have been made from time to time; and the nodules are exceedingly chronic for the most part, and not prone to disappear. This is certainly the case with regard to the nodules on the backs

of the hands, which are such a prominent and quite unusual feature in this case.

It is not an isolated instance in my experience. I have seen other children who have presented a few apparently typical nodules, but, unlike this case, they have not been under observation for a sufficient length of time, such as this child has been, to be able to speak positively as to the absence of rheumatism.

(*Exhibited November the 16th, 1900.*)

### Discussion.

**Mr. Robinson** suggested that it was one of the cases they could not give a name to, and they would confer a great benefit on themselves and the profession if at some meeting of the Society they could talk about cases known as rheumatoid arthritis in children. At such meeting, perhaps, a number of cases could be exhibited and compared. There were two factors in the present case. One set of nodules seemed grouped in relation to joint structures and the synovial sheaths; another set of nodules seemed related to the fibrous tissue simply, on the ear and the occipital ridge. With regard to the nodules on the head, he recollects four cases which had been under his care, but he had not been able to give them a name. In three of the cases the nodules were on the back of the head, and in the fourth there was a curious distribution, viz. in the region served by the auriculo-temporal nerve, though probably that was a mere accident. Whatever name was given to Dr. Carpenter's case, the prefix "osteo" must find a place, as the bones were certainly involved.

**The Chairman (Mr. Clement Lucas)** asked Dr. Carpenter if he would say, in his reply, what had been the result of the microscopical examination.

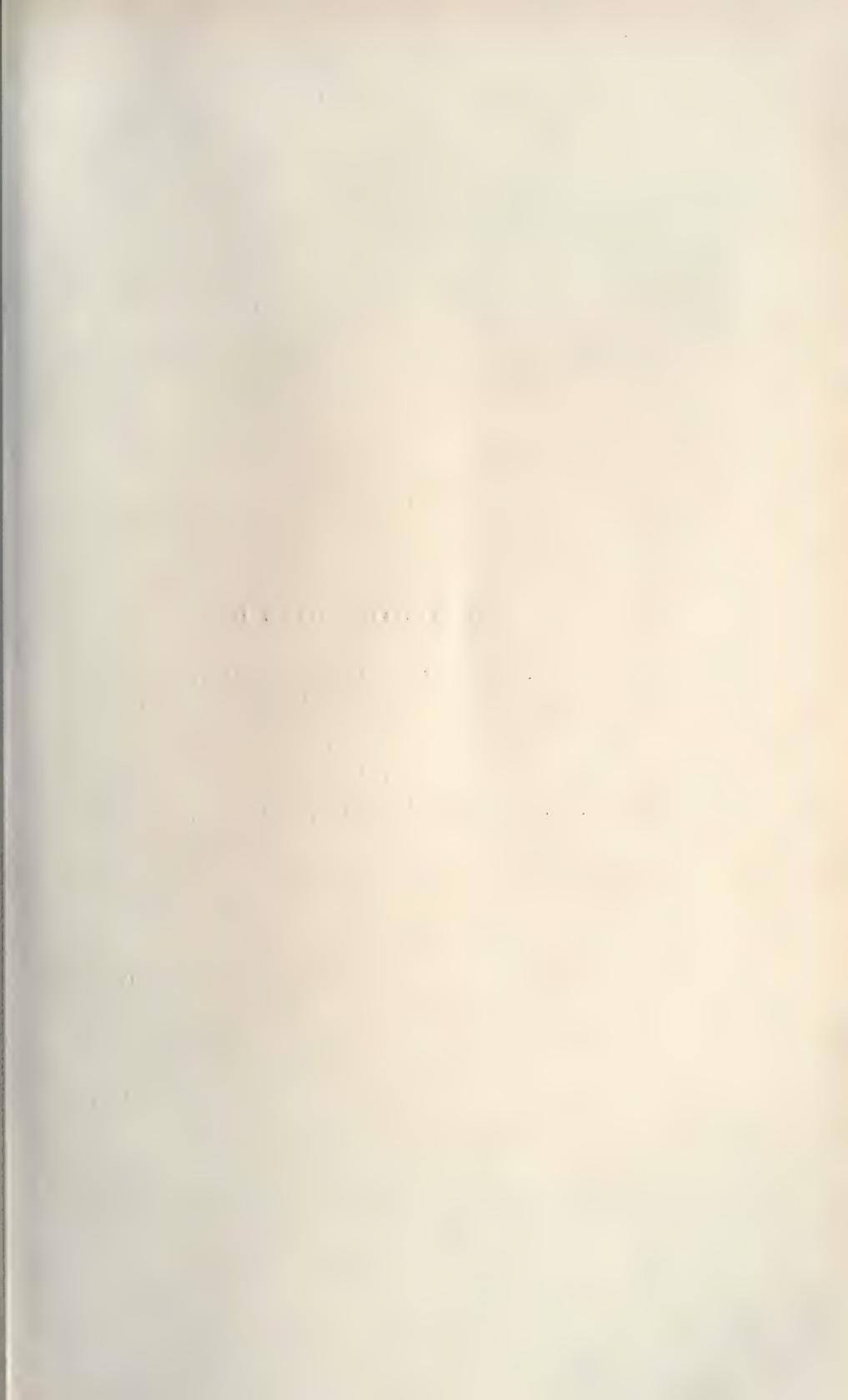
**Dr. George Carpenter**, in reply, said the nodules consisted of fibro-nuclear tissue. No bacteriological examination had been made. With regard to thickening of the bones, radiographs had been taken, but had revealed nothing. He had seen at least three cases of nodules without any history of rheumatism, but the cases had not been under his observation so long as the present one. Of course, in the majority of instances where there were nodules, there was a history of both rheumatism and heart disease.

13. OBLIQUE FRACTURE INTO THE ELBOW-JOINT  
WITH COMPLETE DISLOCATION INWARDS AND  
ROTATION OF THE Ulna IN A BOY AGED TEN  
YEARS.

By R. CLEMENT LUCAS, B.S.

THE patient was rather a delicate boy, born of healthy parents living in London. He was one of seven children, and had previously suffered from measles and pneumonia. At the age of two he is said to have fallen downstairs and to have broken his right arm, which left some stiffness at the elbow. On September the 4th, 1900, he was running in the dusk of the evening after a ball, when a wire clothes-line caught him under the chin and threw him forcibly to the ground on his right elbow. He was brought to the accident department at Guy's Hospital some twenty minutes later, when the forearm was found flexed and fixed at a right angle with the arm, and a great deal of swelling was present in and about the joint. The deformity resisted the attempts made at reduction, and a skiagram was taken to throw light on the form of injury. When this was developed it showed the capitellum of the humerus separated and lying horizontally in the joint, but all attempts made to bring the parts into proper apposition failed. On September the 27th Mr. Lucas's attention was drawn to the case, and he advised that early attempts at passive movement should be commenced, in order, if possible, to preserve some movement at the elbow. A few days later, as the swelling subsided, a sharp angular fragment of bone was found to project under the skin at the back of the joint, and the posterior edge of the ulna could be traced to the olecranon lying on the inner side of the elbow.

On October the 5th, 1900, the case was again brought under Mr. Lucas's notice. The angular fragment of bone projecting beneath the skin at the outer and back part of the joint was threatening to perforate the skin and become



#### DESCRIPTION OF PLATE II.

Illustrating Mr. R. CLEMENT LUCAS's case of Oblique Fracture into the Elbow-joint with Complete Dislocation Inwards and Rotation of the Ulna in a Boy aged ten years.

Skiagram shows capitellum and external condyle split off and twisted round. Line of epiphyseal cartilage in the fragment is well shown.





compound, and fixation at the elbow was almost complete. The case was then admitted into the hospital with the object of having a partial or complete excision performed to restore movement at the elbow.

October 11th, 1900.—After the skin had been disinfected the patient was placed under the influence of A.C.E. and afterwards of ether. On examination, Mr. Lucas found that the ulna was not only dislocated inwards, but so twisted on itself that the articular surface faced directly outwards instead of forwards. He hoped that, when he had opened the joint, it might be possible, after removing the displaced fragment of the humerus, to restore the ulna to its proper position. An incision four inches in length was made over the back of the joint and the loose fragment exposed. When removed, it was found to consist, as the skiagram had shown, chiefly of the capitellum, but it included the external condyle and a portion of the humerus split in a direction obliquely from behind downwards, forwards, and inwards, carrying with it the outer fourth of the posterior surface of the trochlea. It thus crossed the epiphyseal line (so well shown in the skiagram) without following it. After the removal of the fragment which had lain so that the capitellum faced directly inwards, an attempt was made to replace the dislocated ulna, but it was found impossible to retain it in its proper relation to the humerus. Mr. Lucas therefore completed the excision in the usual way by sawing off the sigmoid cavity of the ulna and the head of the radius.

Great interest attaches to injuries at the elbow-joint in children because of the often complex nature of the displacement. Dislocations are common in boys, but, as in the case related, they are frequently complicated with fractures into the joint or damage to the epiphyses. The employment of the Röntgen rays is of special value in such cases ; but while they assist in a more accurate diagnosis, the displacement may be of such a kind as to defy manipulative treatment, and then partial or complete excision can alone secure a moveable joint.

A skiagram of the injury was shown, as well as the lower end of the humerus with its displaced fragment, removed at the operation.

(Read November the 16th, 1900.)

#### Discussion.

**Mr. Abbott** said he had had a case almost identical with the one shown by Mr. Lucas. It was in a girl of about ten years, who had fallen down on her outstretched forearm, causing a dislocation of the radius and ulna backwards and inwards, six weeks before. The skiagram which was taken did not throw very much light on it. He tried to reduce the dislocation under an anæsthetic, but could not, so he cut down by a vertical incision behind on to the ulna, sawed through the olecranon process at its base, and found there had been an oblique fracture of the capitellum and external condyle, which had united in a somewhat forward-tilted position. The callus from that fracture prevented reduction, so by gouging away some bone from the back and lower part of the humerus he was able to reduce both bones, to wire the olecranon, and then close the wound. At first the joint was stiff, but now the patient had excellent movement in every way except complete extension. Evidently there had not been so much damage to the lower end of the humerus as in Mr. Lucas's case, but the callus had been sufficient to prevent reduction.

**The Chairman (Mr. Clement Lucas)** said he had nothing to say in reply except to thank Mr. Abbott for relating his case. He brought his forward on account of the impossibility of reducing it, owing to the twist of the fragment. In Mr. Abbott's case it seemed to be the callus which prevented reduction. He was glad Mr. Abbott was able to preserve so much of the elbow-joint.

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#### 14. A CASE OF HYGROMA OF THE NECK.

BY SEPTIMUS SUNDERLAND, M.D.

(Exhibited November the 16th, 1900.)

#### Discussion.

**The Chairman (Mr. Clement Lucas)** said he had no doubt the diagnosis was correct. There were various explanations of those cystic growths in the neck, and he would be glad to hear what members had to say.

**Mr. Abbott** said these cases were really dilated lymphatic vessels, true lymphangioma or lymphatic nævus, in which one of the spaces had grown infinitely larger than the others; besides the large cysts, which in this case could be felt through the larger cyst. When operating on them by removal he had seen the lymphatic vessels which opened into them, which were larger than the ordinary lymphatics, as the vessels of a nævus, and one could often see a drop of lymph exude on cutting them. After removal and sewing up, the wound showed a great tendency to fill up with clear pinkish lymph, which might need tapping with a director several times before it would finally disappear. The question arose whether any other form of treatment was as good as excision. He had always excised them, but he believed injection was carried out by some. He met with one case of lymphatic cyst on the side of the chest. In another the cyst was in the anterior part of the parotid region, and he was able to remove the whole of it from the mucous membrane side without any external incision.

**Mr. Robinson** thought a better name than hygroma was, as Mr. Abbott had said, cystic lymphangioma. No doubt it was due to dilated lymphatics. A point very difficult of explanation was why these cysts were localised to particular situations. The neighbourhood of the parotid was a very frequent site for them, and from that fact it was suggested by some that they were related to the bronchial clefts; but that could not apply because they were also met with in the supra-clavicular triangle and in the axilla. With regard to treatment, Mr. Abbott had mentioned dissecting them away. He (Mr. Robinson) had also practised dissection in a thorough manner, but sometimes of no avail, for they came back again. Latterly he had obtained more success by injecting them with Morton's fluid, and he intended to carry out that plan in future. Having got rid of the large cyst, he would prick the small ones separately and rub some of the fluid into the openings.

**Dr. Chaffey** (Brighton) said he had seen a few similar cases, but they were mostly under the care of the surgeons, with whom it was the practice to dissect them out. He remembered a very marked case under Mr. Howard Marsh at Great Ormond Street Children's Hospital, involving a large portion of the trunk. That was injected. It seemed to him that it was immaterial which course was pursued.

## 15. A CASE OF UNILATERAL COXA VARA.

By WALTER EDMUNDS, M.C.

THE patient is a boy aged 8 years. Three and a half years ago it was noticed that there was a certain amount of lameness due to an affection of the right leg, and this symptom has gradually got worse. There has been little or no pain. He first came under my observation a year ago, when there was a considerable limp in walking, and on examination it was found that, although flexion and extension of the right (affected) leg were normal, there was decided limitation of abduction, and also some of internal rotation. The pelvis was tilted, and the great trochanter on the right side was higher than that on the left; there was also widening of the right buttock. When the tilting of the pelvis was corrected, little or no shortening of the affected leg could be found by measurement. A skiagram, which Mr. Blacker kindly took, showed that the neck of the affected femur was horizontal, and also that the upper part of the shaft was slightly bowed outwards. Treatment has consisted mainly in rest to the affected part, and a change to the sea-side in the summer. He is now wearing a patten under the left foot, and is using crutches. *(Exhibited November the 16th, 1900.)*

## 16. BRACHIAL MONOPLEGIA IN A NEWLY BORN INFANT, WITH EARLY RIGIDITY.

By WAYLAND C. CHAFFEY, M.D.

W. R—, aged 4½ months, was admitted to the Children's Hospital, Brighton, a few days after birth, with the right upper extremity bandaged to the side, under the impression

FIG. 3.



FIG. 4.



Description of figures:—Fig. 3. Photograph shows widening of the right buttock and obliteration of the dimple over the great trochanter on that side. Fig. 4. Taken from a skogram; the horizontal position of the neck of the right femur is clearly seen.

that a dislocation existed. Next day the bandages were removed, and it was found that the whole of the limb was paralysed and flaccid. After being in the hospital a few days it was noticed that all the muscles were becoming affected with spastic rigidity, and massage with passive movements were commenced. This treatment seemed to have a good effect on the fingers, which became more supple, and regained movement to a limited extent, but the muscles about the shoulder became more rigid, so that the supra- and infra-spinatus, the deltoid, and pectorals held the limb closely approximated to the trunk. The biceps could also be felt firmly contracted at times, though usually counteracted by the triceps, so that the forearm was extended at the elbow-joint. The hand was flexed and pronated, whilst the fingers were flexed on the palm. The supinator longus and extensors of the fingers would therefore appear to have been more affected than the flexors of the fingers.

During the time the infant has been under observation there has been no facial paralysis, but the mother states that it cried soon after birth, and that the face was drawn to one side. She says that there was never any convulsion, and that it was not affected with sickness, but always seemed vigorous in every way except for the condition of the right upper extremity, which was quite flaccid, and hung motionless at birth. There was a large hæmatoma over the right parietal region of the skull. There were distinct bruises on the right side of the face, no injury of any kind being observed on the left side of the skull or elsewhere. The mother further states that she was four days in labour with this her first child, and that eventually it was delivered with forceps whilst she was under the influence of chloroform.

Circumferential measurements of the arm and forearm of the sound and the affected limb show that a difference of a quarter of an inch exists in the two arms, whilst the forearms are equal. This slight wasting on the affected side is, I think, obvious on manipulating the two limbs.

The electrical reactions show very distinct loss of re-

sponse to the faradic current on the affected side, whilst the muscles of the sound limb respond normally to a moderate stimulus. The child cries when the electrodes are applied, so that cutaneous sensibility is probably retained.

The galvanic current, of moderate strength, gives no contraction on the sound side, but Erb's reaction of degeneration is well marked on the affected side. The temperature of the affected limb is not perceptibly altered.

Viewing the case in the light of the foregoing facts, I think we must regard it as a case of monoplegia due to the pressure of the forceps on the brachial plexus, and especially on the branch of the sixth cervical nerve. It would seem strange, however, that the limb under these circumstances should continue so well nourished. What appears to me difficult of explanation is the well-marked and persistent spastic rigidity, which does not ordinarily attend such palsies. The loss of faradic irritability seems, however, to preclude the possibility of its being due to a meningeal haemorrhage involving the cortex cerebri on the left side. Ferrier has localised a centre mainly concerned with the movement of the arm *as a whole*, about the posterior extremity of the first frontal convolution, where it joins the ascending frontal. A case has been reported by H. Jackson where a nodule occupied this region, and gave rise to recurring spasms nearly always limited to the limb of the opposite side, and followed by temporary paralysis of the arm. It was always noted that the spasms began in the *shoulder* and went down the arm, contrary to the usual order.

Then, again, if the cord itself had been injured, I think there would have been some paralysis of the lower extremity on the same side, with more distinct alteration of the knee-jerk. There was, however, probably, slight exaggeration of the right knee-jerk when the case first came under observation, though at present the knee-jerks seem to be equal.

As regards treatment, I should be glad of any sug-

gestions. At present I have resorted to friction and massage with passive movements, and there appears to have been some improvement.

(Read November the 16th, 1900.)

### Discussion.

**Dr. Ashby** (Manchester) asked whether the child was noticed to have any injury to the sympathetic. In one case he saw the pupil of one eye was larger than the other, as if the sympathetic also had been injured. No doubt in this case there was injury to the fifth and sixth nerves in the brachial plexus. An interesting point was as to how that injury was produced. Such cases were not uncommon among the lower classes, where the midwife presided in the lying-in room, and where the arm of the child appeared first she gave it a good pull. That would easily account for the injury. But a certain number of cases occurred in private practice where no force was used, and the labour was not a difficult one. In those cases he supposed pressure must have been exerted in some way. In one or two cases there had been a history of very little liquor amnii, as if there were a tight packing in the uterus and the nerves had got compressed in consequence. He feared the prognosis was bad. Some improvement might take place, but the spastic condition and paralysis might last for many years. Presumably the spastic condition of the arm was due to the unopposed muscular action. Certain muscles had been picked out—the deltoid, the biceps, and the supinators; and there was over-abduction and over-pronation and extension.

**Mr. Robinson** said he did not understand from Dr. Chaffey what presentation it was. He had seen many such cases, and a large proportion of them threw some light on the probable cause of the rupture of the brachial plexus. In a contracted pelvis the shoulders were too broad to enter the constricted brim, so that there was a stretching between the tilted head and the point of the shoulder. As would be seen by the course taken by the cords of that plexus, any stretching would be borne chiefly by the upper cords. That was borne out by the muscles affected, which were supplied by the fifth and sixth nerve-roots, causing the typical Erb's paralysis. In the main the cases were head presentations, and the history showed there had been difficult labours with other children. In another group of cases traction on the arm might give rise to the condition. In the case of a child which he had under his care at Shadwell, a double case, the infant was born very rapidly. It was the twelfth child, and none of the accepted causes could be

traced in the case. Double cases were rare, but they did occur, and it was difficult to account for the paralysis in the one he had mentioned. In reply to the Chairman (Mr. Lucas), he had not noticed anything wrong with the sympathetic. Two or three years ago, in writing a monograph himself on this subject, he came upon a very important paper by Fieux. The author of that said an affection of the sympathetic was very rare; it only occurred in one of the cases collated by him. There was no evidence of damage to the spinal accessory and phrenic nerves.

**Dr. Cautley** said the case was without doubt one of Erb's paralysis of the upper arm type. Recently three cases of the condition had been under his care, but as they were all different they were interesting. They were in the first children of comparatively young mothers—twenty-three or twenty-four years of age,—and they were all head presentations. One was born with moderate difficulty, one with no difficulty, the labour lasting only two hours, and in the third the labour extended to thirty-six hours. The first was a simple monoplegia with flaccidity, the same muscles being affected as in the present case. In the second case, in which the child was born without difficulty and no instruments were used, it had bilateral paralysis. There was rigidity, but that was not due to the unopposed action of the unaffected muscles, as mentioned by Dr. Ashby, but to secondary contraction of the affected muscles. The arms were abducted at an angle of  $45^{\circ}$ . The third case he had hoped to have shown at the last meeting of the Medical Society of London, but unfortunately the child contracted broncho-pneumonia and had since died. The mother of that child was thirty-six hours in labour, and birth occurred in the absence of the doctor, the child being black in the face. In addition to bilateral upper arm paralysis without rigidity it had paralysis of both sternomastoids and the upper part of the trapezius, showing that both spinal accessory nerves were affected; and the diaphragm also was paralysed. Thus the damage was much more extensive than usual. He had some material for examination, and if there was anything further to report he would do so. On the whole he thought the cause was damage to the brachial plexus during birth, and more especially the sixth nerve-root. It had not yet been proved whether there was any affection of the cord. He would look for paralysis of the sympathetic in future cases after the remark of Dr. Ashby. In these cases of his there was certainly no inequality of the pupils.

**Dr. Leonard Guthrie** said the case was evidently one of Erb's paralysis. The reaction of degeneration was present, which put out of court a cerebral lesion. Dr. Chaffey noted that the haematoma was on the right side, the side on which the arm was affected. If the arm trouble were connected with a

cerebral injury, that injury would have to be on the side opposite to the haemato-ma. He thought they could dismiss a cerebral lesion, and especially because such a lesion would result in athetosis, which appeared absent. In the cases he had seen of birth palsy due to a cerebral lesion there was more or less violent athetosis of the whole limb.

**Dr. Chaffey** (Brighton), in reply to Mr. Abbott, said he did not see any facial paralysis, but the mother said the child "cried only on one side of the face" before admission. There was a spastic condition about the fingers in addition to that of other parts of the limb, but they were now getting more supple. There was now no facial paralysis, nor was there seven days after birth. The child was admitted with the arm bandaged at the side, but next morning it was found that there was no dislocation ; it was a case of paralysis of the right upper extremity, and therefore was transferred from the surgical to the medical department. He early examined the pupils, but found no inequality, and there was no sign of any cerebral lesion. If there were, it might have been a haemorrhage in the ascending and first frontal gyri. He believed the brachial plexus was injured. He understood from the mother that the case was one of head presentation. He had not seen the medical man who attended the case. The external injuries were all on the right side of the head and neck.

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## 17. MONOPLEGIA DUE TO AN INTRA-CEREBRAL LESION.

By THEODORE FISHER, M.D.

DR. THEODORE FISHER showed the photograph of a brain showing a small blood-cyst in the upper part of the right lenticular nucleus. It occurred in a child aged 8 months, who had died of broncho-pneumonia. The internal capsule was uninjured, but fibres passing from the arm centre had probably been destroyed. No paralysis had been noticed during the short time the child had been under observation in the Bristol Royal Infirmary, but inquiry from the mother elicited the fact that, although the movements of the face had been unaffected, and both legs had been

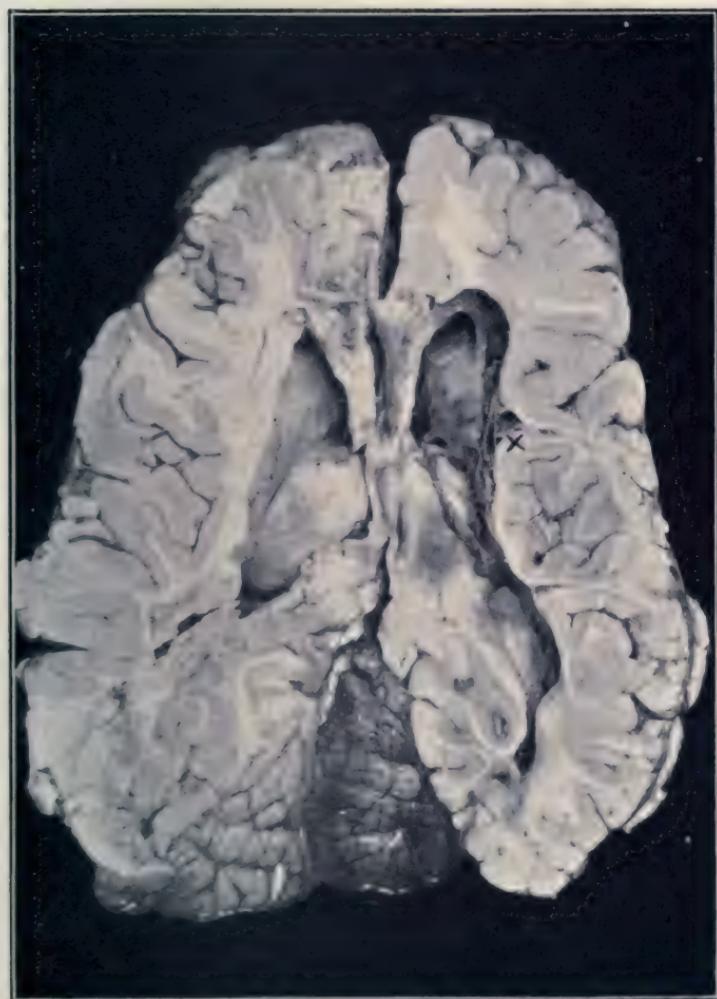


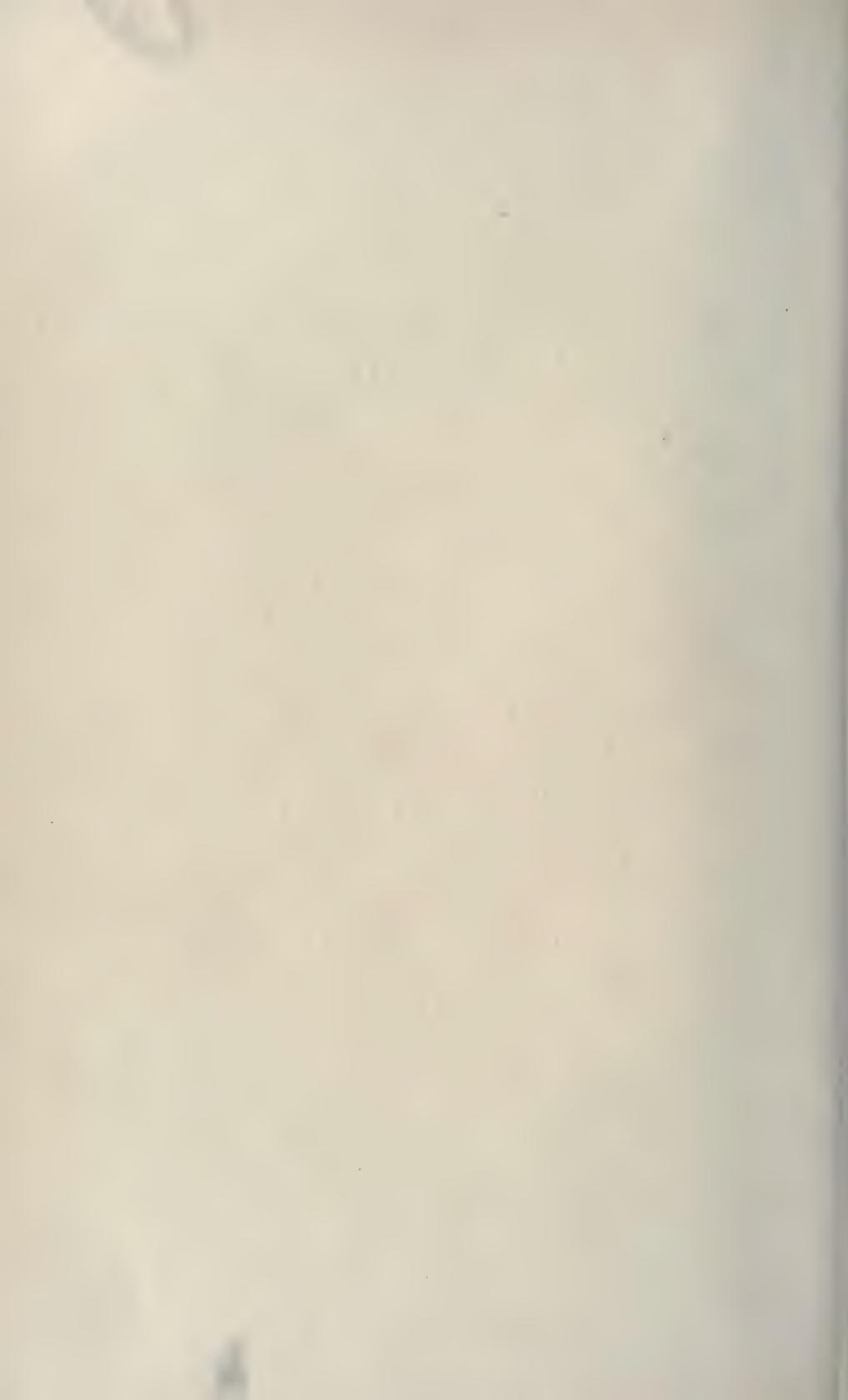
#### DESCRIPTION OF PLATE III.

Illustrating Dr. THEODORE FISHER's case of Monoplegia due to an  
Intra-cerebral Lesion.

Photograph of an intra-cerebral blood-cyst. The  $\times$  is placed to the right of a cyst situated in the lenticular nucleus, which contained crystals of haematin and haematoxin. The lateral ventricle on that side of the brain is somewhat dilated. The ependyma was much stained with blood-pigment.

REPORTS OF THE SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN. VOL. I, PLATE III.





kicked freely, the left arm had not been moved from the time of birth. The labour had not been a difficult one, and microscopical sections showed the absence of endarteritis in the vessels below the cyst. Its causation was therefore obscure.

(*Exhibited by photograph November the 16th, 1900.*)

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## 18. FOUR CASES OF PRIMARY THROMBOSIS OF CEREBRAL VEINS AND SINUSES IN CHILDREN.

BY THEODORE FISHER, M.D.

THE morbid anatomy of hemiplegia of acute onset occurring in children still remains in great measure a mystery. Encephalitis is possibly responsible for some cases, while thrombosis of veins or arteries may be present in others; but post-mortem evidence of the existence of either inflammation of the brain substance or of acute affections of the cerebral vessels is small. Even in those instances where the hemiplegia has complicated acute disease of serious nature necropsies are rare. Thus in thirty cases of hemiplegia occurring in diphtheria collected by Thomas,\* only two necropsies are mentioned. In one there was thrombosis of the middle cerebral artery, and in the other a small haemorrhage in the lenticular nucleus. In another case of diphtheria recorded by Dr. Edgeworth,† in which I made the necropsy, thrombosis of the basilar artery was present. Sir William Gowers‡ has suggested thrombosis of the cerebral veins as a cause of infantile hemiplegia, and quotes a case recorded by Angel Money of such thrombosis occurring

\* 'American Journal of Med. Sciences,' 1896, vol. exi, p. 384.

† 'Lancet,' 1899, vol. ii, p. 1563.

‡ 'Diseases of Brain,' second edition, p. 462.

after scarlet fever. A case mentioned by Abercrombie\* is also sometimes referred to, but that is by no means a clear example of hemiplegia secondary to thrombosis of a cerebral vein. A more suggestive case is one recorded by Handford,† which proves that primary thrombosis may occur in the venous circulation of the brain of an apparently healthy child. But apart from the question of the possibility of infantile hemiplegia being caused by thrombosis of the cerebral veins, the occurrence of such thrombosis is interesting on account of its rarity. Osler, for example, has only met with two instances, and they were associated with meningitis.‡ In the following cases there was no disease of the cerebral meninges that could have been responsible for the thrombosis.

*CASE 1. History and state on examination.*—A girl, aged 4 years, was admitted, November the 23rd, 1896, into the Bristol Royal Infirmary, under the care of Dr. Shingleton Smith, suffering from ascites of short duration. Swelling of the abdomen had been noticed for a week only. The abdomen measured twenty-five inches at the level of the umbilicus. A week later the distension of the abdomen was one inch less. On December the 1st, at 10.15 p.m., the child had an attack of convulsions which lasted three minutes. The convulsions were followed by twitchings of the left side, which persisted for eight hours. On December the 2nd and 3rd twitchings occurred again at intervals, and on the 4th her mouth was noticed to be drawn to the right. On December the 5th the left upper and lower extremities were found to be paralysed. It may be worthy of mention that on the night of the convulsions the temperature rose to 100° F., and on the following day it reached 103° F., but in the course of the next two days returned to the normal. In spite of the hemiplegic attack the child in many ways seemed to be improving. The

\* 'British Medical Journal,' 1887, vol. ii, p. 1325.

† 'Transactions of the Pathological Society of London,' vol. xxxviii, p. 40.

‡ 'Text-book of Medicine,' Pepper, vol. i, p. 694.

abdomen steadily decreased in size, and on December the 19th measured four and a half inches less in circumference than at the time of admission. On December the 21st, however, nearly three weeks after the onset of the convulsions, the child complained of sore throat; membranous tonsillitis proved to be present, but no diphtheria bacilli were found. The larynx became implicated, and the child died.

*Necropsy.*—The superior longitudinal sinus was found to contain partially decolourised and softening thrombus throughout its length, which, however, was not sufficient to obstruct more than half the diameter of the lumen. On removal of the dura mater all the veins running up to the superior longitudinal sinuses on the right side of the brain were seen to be full of pale thrombus, and a large number of veins over the left cerebral hemisphere were also thrombosed. The appearance and consistence of the clot in the veins on the two sides of the brain did not materially differ, but it was evident from the difference in aspect of the convolutions of the two hemispheres that thrombosis had commenced on the right side. While the convolutions of the left side preserved a natural appearance except for congestion of the meninges covering them, the convolutions of the right hemisphere were greatly swollen, and had become flattened against the dura mater by the pressure to which their increased size had subjected them. The upper end of the right ascending parietal convolution measured three times as much across as the same convolution on the opposite side. The convolutions most affected were extremely soft, and dotted over with punctiform haemorrhages. The frontal, parietal, and occipital lobes had all suffered, but the upper parts of the frontal and the parietal lobes were most affected. The lateral sinuses on both sides also contained patches of ante-mortem thrombus, and the right internal jugular was blocked throughout its course by adherent but softening clot. Examination of the tympanic cavities showed that the right contained mucus only, but the left contained some muco-pus. This, however, was probably of recent

date, and secondary to the membranous tonsillitis which was present. The peritoneal cavity contained only a few ounces of fluid, but well-marked cirrhosis of the liver was present. Several divisions of the portal vein contained pale thrombus. The blocking of these vessels had led to some congestion of the small intestine. There was nothing noteworthy in any of the other organs except the larynx and bronchi. Membranous exudation extended from the larynx to the small bronchial tubes. Some bronchopneumonia of the lower lobes of the lungs was present.

It is worthy of note that the onset of the cerebral symptoms occurred nearly a month before death. This suggests that the cerebral veins were first affected. Thrombosis of the right jugular vein probably followed considerably later, and the clotting found in the branches of the portal vein must have been of quite recent origin, since the ascites had been steadily disappearing, and at the time of death no longer existed. The presence of diphtheria, a disease which sometimes gives rise to ante-mortem clotting, may have led to rapid increase of the thrombosis. The disappearance of the ascites has already been referred to. Peritoneal fluid was being rapidly absorbed when the hemiplegia occurred, and it seems possible that some organic body, absorbed from the peritoneal cavity, may have started the thrombosis. Twice I have seen extensive thrombosis of pulmonary veins in chronic peritonitis with effusion. No cultures, however, were taken from the clot in this case, so that the presence of micro-organisms cannot be excluded, but the discovery of such organisms would not have proved the primary cause of the thrombosis to have been infection, since microbial invasion possibly followed the membranous tonsillitis. Whatever may have been the cause of the thrombosis of the cerebral veins, we may with some reason conclude that the thrombosis of the veins over the right cerebral hemisphere occurred at the time of the onset of the convulsions; and it is also probable that, had it not been for an attack of membranous tonsillitis

and laryngitis, the child would have left the infirmary temporarily free from ascites, but with left hemiplegia.

**CASE 2. History and state on examination.**—A child aged 2 years, was admitted into the Bristol Royal Infirmary, under the care of Mr. Munro Smith, in September, 1897, for noma of the left cheek. A few days after admission cerebral symptoms, which were thought to indicate meningitis, set in. Twenty-four hours after their onset the child died.

**Necropsy.**—The superior longitudinal sinus was found free from ante-mortem clot, but the meningeal veins over both hemispheres were thrombosed, the meninges intensely congested, and the convolutions studded with petechiæ. Both lateral sinuses contained a little ante-mortem clot. The right tympanum contained a little muco-pus, but the left was quite free. Dr. Symes found a bacillus, both in the discharge from the ulcer on the cheek and in a culture taken from one of the thrombosed cerebral vessels, which he considered corresponded to the bacillus described by Schimmelbusch as occurring in cases of noma.

The next case is of greater interest, but instead of the superficial veins being affected, the choroid plexuses and veins of Galen were thrombosed. The thrombosis was secondary to summer diarrhœa.

**CASE 3. History and state on examination.**—A female infant, aged 5 months, was admitted into the Bristol Royal Infirmary, under the care of Dr. Prowse, for diarrhœa and vomiting, on August the 5th, 1899. Four days later spasmodic opisthotonus set in, and continued at frequent intervals for forty-eight hours. Some rigidity of all the limbs was present. There was convergent squint of both eyes, and some lateral and vertical nystagmus. After the opisthotonus passed off, rigidity of the left side remained. The knee-jerks were exaggerated on both sides. The diarrhœa ceased, but the child remained ill. The temperature, which was 100·4° F. on admission, continued high; it reached 106° F. on the second day of the opisthotonus, but

it was usually at some point between 103° F. and 104° F. On the day of death, which took place on August the 14th, seven days after the onset of the opisthotonus, the temperature rose to 106° F.

*Necropsy.*—The exterior of the brain presented a perfectly normal appearance. No tubercles were present, and there was no trace of meningitis. The arteries and veins were everywhere quite normal and free from ante-mortem thrombus. On resting the brain upon its base the cerebral hemispheres fell apart, owing to softening of the corpus callosum. The exposed ependyma of the lateral ventricles was much congested, and the brain substance in places dotted over with punctiform haemorrhages. Further examination showed the veins of Galen to be distended with pale ante-mortem clot. The choroid plexuses presented an unusual appearance. The left choroid plexus was five or six times its normal size, and the right also was much enlarged. Both were a dirty white colour, and the surface of each was smooth compared with that of a normal choroid plexus. The appearance was found to be due to their distension with hard thrombus. A few small thrombi stood out from the commencement of the straight sinus, but the sinus itself was free from ante-mortem clot. All the other sinuses were also free from ante-mortem thrombus. The optic thalami were softened, but there was no haemorrhage into their substance. Both tympanic cavities contained a little muco-pus. Some broncho-pneumonia was present at the bases of both lungs, but none of the other organs presented anything abnormal. Unfortunately the intestines had been washed out before cover-slip preparations had been obtained. Cultures from the thrombosed plexuses proved sterile. Microscopic sections of a thrombosed choroid plexus showed the venous spaces filled with granular disintegrating clot. In many of the arterioles similar disintegrating clot was present, but others showed normal blood-cells. The villi were glued together by fibrinous exudation, which in some parts was still fibrinous, but in others granular. In many places

the epithelium over the villi was proliferating, and desquamated cells were entangled in the fibrinous exudation. No micro-organisms could be discovered.

Although no micro-organisms were discovered in the thrombosed plexuses, it seems probable that the thrombosis was produced by bacterial invasion from the intestine. In connection with this point it may be worthy of mention that the previous summer in a case of death from summer diarrhoea in a child in which thrombosis of the right renal vein was found, cultures from the thrombus showed streptococci, and cover-slip preparations from the contents of the small intestine also showed streptococci. The presence of marked opisthotonus in this case is possibly of some interest. Dr. Herringham has recorded a case in which a small glioma in the centre of the iter gave rise to attacks of this rigidity, and has suggested that it is produced by irritation of the grey matter which is continued upwards from the spinal cord.\* It is of interest to note in this connection that Dr. Goodall has recorded a case of thrombosis of the veins of Galen and choroid plexuses in a girl, aged eight years, recovering from scarlet fever, in which general rigidity followed convulsions,† and in another case occurring in a woman aged twenty-five, recorded by Gibson and Stewart,‡ opisthotonus was present.

*CASE 4. History and state on examination.*—A boy, aged 11 months, was admitted into the Bristol Royal Infirmary, under the care of Dr. Shingleton Smith, on February the 23rd, 1900, with broncho-pneumonia. He had been ill for a week. He was drowsy when admitted. His head was held somewhat retracted during the first week he was in the Infirmary, but no symptoms manifested themselves which led to the suspicion of any cerebral affection. The drowsiness, however, continued. The temperature was raised, sometimes nearly reaching 105° F.,

\* 'St. Bartholomew's Hospital Reports,' vol. xxxvi, p. 31.

† 'Clinical Society's Transactions,' vol. xxx, p. 139.

‡ 'Edinburgh Hospital Reports,' vol. iii, p. 454.

but occasionally dropping to the normal, or even below. He died three weeks after admission.

*Necropsy.*—On opening the dura mater an excessive amount of cerebro-spinal fluid flowed away. Several of the cerebral veins contained the long ribbon-like pale thrombi not infrequently seen, which, if not entirely post mortem, must be formed very shortly before death. In addition to these flat thrombi, thrombosis of more definite ante-mortem character was present. A vein over the centre of the right parietal lobe was distended with hard pale ante-mortem clot. The left middle cerebral vein was also fully distended with hard stratified pale thrombus, and equalled a quill pen in diameter. The superior longitudinal sinus was quite free from ante-mortem clot; the straight sinus was also free, but attached to the anterior end of the straight sinus were two thrombi apparently drawn from the veins of Galen. In the left lateral sinus, where it passes below the tentorium cerebelli, was a star-shaped thrombus drawn out of veins entering from the occipital lobe. The sinus was partially filled with ante-mortem clot at this point for the space of about half an inch, but elsewhere was free. There was no ante-mortem thrombus in the right lateral sinus, but the left cavernous sinus contained mixed ante-mortem and post-mortem clot. There was some congestion of the meninges in the neighbourhood of the thrombi. No distension of the ventricles was present. Both tympanic cavities contained pus, but this is so common an occurrence in acute diseases in children, that any relation to the thrombosis of the cerebral veins must be considered doubtful. The upper lobe of the right lung was solid throughout, but of the mottled character which frequently distinguishes a confluent broncho-pneumonia from a fibrinous pneumonia, and in this case there were also three or four small areas of commencing suppuration. There was nothing else noteworthy except in the large intestine, where the solitary follicles were much swollen, and here and there small islets of swollen mucous membrane surrounded several enlarged

follicles. Cultures from the thrombosed veins and from the lungs showed the presence of streptococci.

In this case the absence of localising symptoms was noteworthy. The middle cerebral vein was completely blocked by the thrombus, and although the clot was not commencing to break down, it was stratified, and probably had been in process of deposition during several days before death. There was, however, little congestion of the meninges in the neighbourhood, and no evidence of softening of the brain substance.

Two at least of the above cases illustrate the fact that thrombosis of the cerebral veins and sinuses may be a cause of cerebral symptoms when they arise as a complication of disease in children. Especially is this likely to be the case when the disease is one in which micro-organisms may obtain access to the circulation. In two of the above cases micro-organisms were found in the thrombus, and in a third, although not discovered, they were probably present. In the remaining case micro-organisms were not looked for, and although we have thought it probable that thrombosis occurred independently of infection, we have no proof that such infection was absent.

A more interesting question than the causation of thrombosis of cerebral veins in children is the possibility of this thrombosis being a lesion which may give rise to hemiplegia in a healthy child. In one of the above cases hemiplegia resulted from thrombosis, which in the character of its onset resembled some cases of infantile hemiplegia. Generally the paralysis develops more rapidly, but apparently thrombosis of cerebral veins may occasion hemiplegia, which sets in suddenly. A brief history referring to a specimen recently added to the St. Bartholomew's Hospital Museum illustrates this point. The thrombosis occurred not in a child, but in a woman, aged 24 years. The age of the patient does not, however, materially detract from the value of one feature of the case.

After suffering from headache and pain in the back for

a week she was admitted to the Brook Fever Hospital, Shooter's Hill. Within five hours of admission she was seized with complete right hemiplegia and aphasia, without loss of consciousness. Epileptiform fits followed, but she did not lose consciousness until just before death, which occurred five days later. The superior longitudinal sinus and right lateral sinus were found thrombosed, together with many of the surface veins opening into them.\*

Yet although the hemiplegia set in suddenly in this case it had been preceded by headache, and thus differs from most cases of hemiplegia occurring in children who are old enough to complain of their ailments. A perusal of a few of the recorded cases of thrombosis of cerebral veins and sinuses occurring in adults seems to show that headache which lasts for some days almost invariably precedes any local or general convulsions. This appears to be the case even when the thrombosis is limited to cerebral veins.†

In a case, however, occurring in a child, a girl aged 7 years, recorded by Dr. Phear, the first symptom appears to have been toothache, which preceded unconsciousness of sudden onset only by a few hours,‡ and in another case recorded by Sir Dyce Duckworth, in a girl aged 14 years, localised convulsions of the left hand occurred as a symptom of thrombosis of the superior longitudinal sinus and the veins entering it from the right side of the brain on the day headache was first complained of. In this case, however, the focal symptoms set in with much greater severity the following day. They were ushered in by a scream, but were associated with no loss of consciousness.§ In Phear's case the child also screamed at the onset of the cerebral attack. Twice I have known mothers describe the onset of unconsciousness preceding hemiplegia in a child in apparently good health as being ushered in with a scream.

\* 'St. Bartholomew's Hospital Reports,' vol. xxxvi, p. 308.

† *Vide* a case recorded by Richardson, 'Journal of Mental and Nervous Diseases,' 1897, p. 403.

‡ 'Clinical Society's Transactions,' vol. xxxi, p. 5.

§ *Ibid.*, vol. xxiii, p. 101.

One does not lay any stress upon this. A fit due to any cause may announce its onset by a scream, but Phear's case is interesting as showing that even thrombosis of a cerebral vein or sinus may manifest its presence by an attack of apoplectic suddenness, resembling that seen in infantile hemiplegia.

Allowing, however, that thrombosis of a vein may give rise to cerebral symptoms of acute onset, the cause of the thrombosis has still to be considered. When the thrombosis occurs as a complication of some disease, although the immediate factor in the causation of the ante-mortem clotting may not be obvious, its presence is comparatively easy of explanation. Thrombosis of a cerebral vein or sinus in a healthy child is an occurrence more difficult to understand, especially if it manifest itself without being preceded by symptoms that suggest even indisposition. Infection of some kind would be the most probable cause of the thrombosis, and one would expect more or less indication of an abnormal state of the blood before clotting in a vein takes place.

Yet this point cannot be strongly urged against the view that thrombosis is the cause of infantile hemiplegia. Consideration of other morbid conditions of the blood due to infection—for example, some varieties of purpura—shows that they may display themselves suddenly without warning. If, however, thrombosis of cerebral veins of infective origin be the cause of infantile hemiplegia, one would expect, in at least a small percentage of cases, that the thrombosis would be progressive, and lead to a fatal ending. It is scarcely necessary to remark that such an event is virtually unknown. Yet it must be remembered that even when hemiplegia occurs as a complication of some acute disease, and in such cases vascular thrombosis is known to exist, the great majority of the children attacked recover.

A possible explanation for the thrombosis might be that it is set up, not by a blood infection, but by a toxin absorbed from the stomach or intestines. Belief, however, in such an origin would not enable one more readily to

understand some of the features of infantile hemiplegia. It would not be clear why the dose of toxin should always be sufficient only to cause clotting limited to a few cerebral veins, and why it should not be repeated more than once during childhood.

We have been speaking of ante-mortem clotting in the veins. It is more easy to believe that thrombosis may occur in a healthy cerebral vein than in a healthy cerebral artery, but the occasional occurrence of thrombosis in a cerebral artery as a complication of some febrile states in children shows that arterial thrombosis must be considered as one of the possible causes of infantile hemiplegia.

If, however, the theory of cerebral vascular thrombosis as a cause of infantile hemiplegia be rejected, it seems necessary to look upon the presence of encephalitis as the only reasonable alternative. Here again we meet with difficulty. Although, when viewed from the clinical standpoint, infantile hemiplegia may not very closely resemble most of the recorded cases of thrombosis of cerebral veins and sinuses, it has still less in common with the descriptions of cases of encephalitis. In inflammation of the brain substance premonitory symptoms are well marked, unconsciousness or mental confusion is prolonged, while the focal symptoms are variable, and often long in making their appearance. If encephalitis be the cause of infantile hemiplegia, it must be encephalitis of specific character.

[Since writing the above a case has been under my care at the Bristol Children's Hospital that seems to lend support to the vascular thrombosis theory of infantile hemiplegia. A girl aged ten years, who was brought to the out-patient department for some slight ailment, had a large tortuous vein running up from the centre of the right groin over the right half of the abdomen. This was said to have appeared when the child was eighteen months of age, towards the end of an attack of repeated convulsions, associated with unconsciousness, of a week's duration.

The right leg and thigh were much swollen at the time the enlarged vein was first noticed. The child is now weak-minded. She cannot read or be trusted with the most simple errand. Before the convulsions, however, she is said to have been bright and intelligent, and could say several words. It may be of interest to add that the mother attributed the convulsions to the falling of the child into a dirty stream two or three weeks before their onset. The child was nearly drowned, and after being pulled out vomited much dirty water. In this case it is obvious that blockage of the right external or common iliac vein is present, which may with reason be attributed to thrombosis occurring at the time the enlarged abdominal vein was first noticed. The evidence of thrombosis in one vein suggests that the associated cerebral symptoms were due to thrombosis within the cranial cavity. This thrombosis may have been of an infective nature consequent upon the entrance of micro-organisms contained in swallowed dirty water into the blood.]

*(Read November the 16th, 1900.)*

### Discussion.

**The Chairman (Mr. Clement Lucas)** said they were all greatly indebted to Dr. Theodore Fisher for reading his admirable paper. He hoped the Society would encourage the delivery of such papers. In order to avoid leaving such papers until just at the close of a meeting, he thought it would be well if some meetings could be held for the hearing of papers, and others for pathological specimens. He apologised to Dr. Fisher from the Chair for the small attendance to hear his paper, owing to the lateness of the hour. He hoped they would be able to do justice to the paper when it appeared in the 'Reports.'

**Dr. George Carpenter** said he thought Dr. Fisher's paper was, from a medical point of view, of the greatest possible interest, and he felt disappointed that they were deprived of the opportunity of hearing other physicians discuss it. He had never seen a case similar to the one narrated. He hoped to obtain full benefit from the paper in the 'Reports.' There was so much in it that was of interest, and it was a matter for regret that the limited time at Dr. Fisher's disposal necessitated so hurried and meagre an abstract of the results of his observations.

## 19. A CASE OF MYOSITIS OSSIFICANS.

By MORLEY FLETCHER, M.D.  
(INTRODUCED.)

THE case was that of a boy, aged 9 years, who had suffered for two years from increasing stiffness of the arms and shoulders. There was no history of injury. The muscles of the neck, shoulders, and upper arms, and one rectus abdominis, contained extensive bony masses. There was also present the condition of the great toes so often associated with myositis ossificans, namely, microdactyly. Both great toes were of small size, and the terminal phalangeal joints in both were ankylosed. A point of great interest in the case was the association of numerous exostoses. There were several on the bones of the head, one on the hand, and one on each tibia.

With regard to the pathology of the disease, it was very obscure. He looked upon it as an abnormal condition of the mesoblast, that from which the mesoblastic structures were formed, and as related to the condition of multiple exostoses and to multiple neuro-fibromata, rather than an inflammatory condition of muscle. There had recently appeared in the 'American Journal of Medical Science' an interesting paper on the condition by Miss de Witt, who had collected the full seventy-eight cases which had been related up to that time. In 70 per cent. of those cases there was the condition of microdactyly, *i.e.* the great toe was shorter than any of the other toes. There was also ankylosis of the terminal phalangeal joint. The patient was skia graphed at St. George's Hospital, and the photograph showed there was no absence of the phalanx; it was simply a synchondrosis. The boy also had thickening of the bridge of the nose.

(*Exhibited January the 18th, 1901.*)

### Discussion.

**Mr. Abbott** asked whether, in the other recorded cases, there had been exostoses at the epiphysial line apart from the ordinary exostoses; *i.e.*, at the inner side of the tibia.

**Dr. Lewis** (Folkestone) asked how long such cases lasted, and what was the prognosis. Could nothing be done for the relief or cure of the condition?

**Dr. Cautley** thought Dr. Morley Fletcher's case an extremely interesting one, especially on account of the association of exostoses with calcification of muscles. One often saw cases of multiple exostoses, sometimes in several members of one family, but he had never yet encountered a case in which the two conditions mentioned were co-existent. He had not seen Miss de Witt's paper, and would be glad to hear whether there was such an association of conditions in any of the cases there recorded. Could Dr. Fletcher also say whether, in any of the recorded cases, there was any change in the character of the urine, either in regard to acidity or the proportion of lime salts?

**Mr. Clement Lucas** asked whether Dr. Morley Fletcher had attempted anything in the way of treatment of the case. It was usual, as soon as bony growths appeared, to give up hope in the case. He thought by putting such children into the same state (as regarded food) as those children who had rickets, *i.e.*, withholding lime salts, there might be a tendency to the absorption of the superfluous bone. In other words, might not the production of artificial rickets, by the withholding of parts of the diet which produced bone, be justifiable in such cases?

**The Chairman (Dr. Dawson Williams)** said one point on which he would like information had not been referred to, namely, what was the common age at which the condition commenced? In the only two cases of which he had carefully read the reports, the patients were older than the present one; indeed, one was an adult when the condition became established.

**Dr. Morley Fletcher** (introduced), in reply, said he believed the present case to be one of the few where multiple exostosis was associated with a calcified condition of the muscles. He had not seen a description of any other case having a large number of exostoses, but had seen them with a single bony outgrowth of a cartilaginous nature. With regard to Dr. Cautley's question about lime salts in the urine, no quantitative analysis of the urine had been made, but it should be carried out. He had not seen any record of a case in which the urine was stated to have been altered. In reply to Dr. Dawson Williams, the age at which the condition usually appeared was seven or thereabouts. It was very difficult to speak of the ultimate duration of such cases. He saw in Vienna a case which lived to adult age, but by that

time scarcely a muscle had escaped calcification. When it began in the adult it was not due to true myositis ossificans progressiva, but was myositis with the formation of osseous tissue, which was preceded by some chronic inflammatory process, such as in connection with tuberculous glands. That was very distinct from the present disease, which was a true bony formation, not simply calcification, as some believed. Of course it would be possible to try the effect of administering lactic acid, but he thought it would only result in dissolving out some of the calcium salts if the ancient view of rickets were correct, though he believed it was not.

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## 20. A NERVE CASE OF DOUBTFUL ORIGIN.

By MORLEY FLETCHER, M.D.

(INTRODUCED.)

A boy, aged 11 years, for two years past had been losing interest in his school work, and had occasional incontinence of urine. Unsteadiness of gait, with dragging of the right leg, had existed for nine months, and was steadily increasing. The boy was obese. There was no muscular wasting; speech was halting and deliberate. There was slight lateral nystagmus. The optic discs showed slight swelling with distinct atrophy, the atrophy being apparently post-neuritic. There was obvious intention tremor of the arms. The knee-jerks were greatly increased, especially on the right side, but there was no ankle-clonus. There was distinct inco-ordination of the lower extremities. Dr. Fletcher discussed the diagnosis of the case, and considered that it lay between disseminated sclerosis and cerebral tumour. He regarded the former as the more probable explanation of the condition.

*(Exhibited January the 18th, 1901.)*

### Discussion.

**Dr. Sutherland** asked whether there was any possibility of the thyroid being affected, and whether the temperature had been subnormal.

**Mr. Sydney Stephenson** said it would be interesting to know whether the fields of vision had been tested, and if so, whether any alterations in them had been noted. Alterations in the field, either for white or for coloured light, was common in older people the subjects of disseminated sclerosis. He would also be glad to know whether the optic atrophy involved the whole of the disc, or only the outer half, or outer third of it. Had there been any alteration in the sight from time to time? The sight of people having that form of optic atrophy was known to vary very much at different examinations; at one time the patient could see only large objects, while at another the vision would perhaps be  $\frac{6}{60}$ .

**Dr. Fletcher Beach** said he would like to hear whether any treatment had been adopted in the case. It also occurred to him to ask a question about the thyroid. If the fat was increasing would it not be advisable to try the administration of thyroid extract? He had tried it in the adult in many cases lately, and with great success.

**Dr. Leonard Guthrie** thought the patient very young for disseminated sclerosis, as it did not usually occur before the first decade. The symptoms and general appearance of the disease were more suggestive to him of Little's disease. He did not notice in the narration of the case whether there was any family history of nerve disease, though its absence would not preclude the possibility of Little's disease, as it sometimes happened that the tendency to disease was more marked in a subsequent generation. The only other possibility was that it might be a case of Friedreich's disease. He would also like to hear whether any lateral sclerosis was present. He inclined to the diagnosis of Little's disease.

**Dr. Morley Fletcher** (introduced), in reply, said it was difficult to get information about the thyroid in this child, as it was so fat. The temperature was normal for a child of that age; it had never been subnormal while the patient was under observation. He was gaining weight. The fields of vision had not been taken; they had not the requisite apparatus in the hospital. He would be glad if Mr. Stephenson would give him the benefit of his special knowledge in that direction. The vision was very bad in one eye, and far from good in the other. No reliance could be placed on the patient's answers, as he was very neurotic, but it was believed that the sight was now worse than when he was first admitted. The patient had not been given thyroid, but for two months had been taking iodide of potassium. He would commence giving thyroid. There was no family history of any neurosis or syphilis. With regard to the diagnosis, he had markedly increased knee-jerks, but there was no lateral sclerosis. He did not think it was a case of Little's disease,

because of the marked rigidity generally present in that condition. The child had increased knee-jerks and slight spasticity, but not the rigidity usually associated with cortical sclerosis. It was not uncommon for disseminated sclerosis to begin in the young on the Continent.

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## 21. MULTIPLE ARTHRITIS ? GONORRHŒAL IN NATURE.

By H. BETHAM ROBINSON, M.S.

F. H.—, a little boy aged 4½ years, was admitted to the East London Hospital for Children in July, 1900, with swelling of several joints. About nine months before swelling started in two toes, a finger, and the right knee, of gradual progress. The child then had whooping-cough, and the disease spread to other joints.

He had walked well from a year and ten months up to three years, then the lesions appeared, and at the same time he developed whooping-cough, which he has had ever since. The family history was of no account beyond the father being said to be rheumatic.

On admission he had an “adenoid” expression and some enlargement of glands at the angles of the jaw; the presence of adenoids was confirmed by the finger. The joint lesions were as follows:

*Upper extremity.—Right side.*—The ring finger was fusiformly swollen about its proximal half, the greatest diameter being at the first interphalangeal joint, with bony thickening over the adjacent phalanges. The right hand deviated to the inner side, and the wrist-joint was much swollen, especially dorsally and on the outer side. The movements were limited, accompanied by slight grating, but with no pain. The second joint showed

thickening of synovial membrane without fluid, with restricted movement. The shoulder-joint was normal.

*Left side.*—The metacarpo-phalangeal joint of the thumb was swollen, and also the metacarpo-phalangeal joint of the middle finger. The wrist was normal. Both the elbow and shoulder joints were pulpy, with apparent bony thickening about the joint margins.

*Lower extremity.*—*Right side.*—The proximal interphalangeal joints of the great and middle toes and both interphalangeal joints of the little toe were enlarged.

*Left side.*—Marked enlargement of the proximal interphalangeal joint of the second toe, and of both joints of the little toe.

On both sides the hip-joints were flexed, and any movement very limited. On attempting extension there was considerable resistance, and lordosis was produced. Both knee-joints were much swollen, due chiefly to the synovial membrane, without effusion; the knees were flexed, and there was some dropping back of the tibia and outward rotation. Both ankles showed thickened synovial membrane, especially on the left side.

The back showed a long posterior curve, with some limitation in movement.

Over all the joints there was neither redness nor especial tenderness.

The outline of the pupil of the right eye was somewhat irregular, and there was slight opacity on the anterior face of the left lens. Both pupils responded very slightly to atropine, and both were irregular.

There was no evidence of congenital syphilis, and no history of any gonorrhœal infection, although the state of the joints strongly resembled those met with in adults from that disease.

On July the 20th four doses of tuberculin B were administered without any reaction.

An extension of 2 lbs. was put on each leg on July the 23rd, but this was badly borne, and had to be given up in favour of massage.

The child after this was discharged, but was readmitted to the hospital on December the 13th, and was in the same condition as when he left.

His temperature was always normal, and his urine was not albuminous. (*Exhibited January the 18th, 1901.*)

### Discussion.

**Dr. C. W. Chapman** asked what the diet was. It might be one of those children who were given beer from their earliest days.

**Dr. Sansom** urged that photographs should be taken of the present case and the one which preceded it, as it would be very instructive to have permanent records. He thought it would be well for the Society to possess an album of photographs of instructive cases. There was much difficulty about such a case; he had casually examined for the spleen, but could not make out any enlargement of it, or of the glands. It looked to him like a case of osteo-arthritis, but the question arose as to whether there was any syphilis about it.

**Dr. Cautley** said he thought the most likely diagnosis was that suggested by Mr. Robinson, namely, gonorrhœal arthritis. It seemed to differ considerably from osteo-arthritis in children, for in them the metacarpo-phalangeal joint was considerably enlarged, but in the present case those joints seemed to have escaped entirely. The hand was comparatively little affected, and the disease was limited to the larger joints, without much effusion. If the case were an adult there would be no hesitation in diagnosing prolonged severe gonorrhœal rheumatism.

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## 22. LYMPHANGIECTASIS OF THE TONGUE.

BY H. BETHAM ROBINSON, M.S.

THIS was present in a little girl aged 4 years, and it appeared from the history to be congenital. Over the whole surface of the tongue, above and below, the mucous membrane was much thickened and papillated, with fissures in it, and scattered over the surface were numerous vesicles.

The muscular substance of the tongue appeared normal. In addition there was "port wine staining" of the lower lip.  
(*Exhibited January the 18th, 1901.*)

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### 23. CONGENITAL CICATRICES: A PROBLEM IN ANTENATAL PATHOLOGY.

By H. BETHAM ROBINSON, M.S.

A POORLY developed male child, aged 8 weeks, was brought to me on January the 1st, 1901, showing the following congenital lesions:—(1) On the outer side of the middle of the left femur was a linear scar about one inch long, adherent to the deeper tissues, and below which the bone was definitely thickened; over the scar was an epithelial scab. (2) Over the crests of both tibiæ and over the fibulæ in the middle of the legs were also short cicatrices, but with no scabs. There were no other lesions.

The child was full-term and the second child. The birth was easy, but there was noted deficiency of amniotic fluid. The mother gave a history of having slipped off a chair three weeks before the child was born, and of knocking herself in the abdomen.

As to the nature of this rare condition several suggestions can be considered:—(1) Intra-uterine fractures, which may be disposed of in saying that such symmetry and multiplicity of the lesions was highly improbable. (2) Some form of intra-uterine pressure from the coils of the cord, from amniotic bands, or from some adhesions of the amnion at these points with deficient fluid; of these, the latter would be the more likely, the only stumbling block being the thickening of the bones beneath, unless pressure would cause such. (3) Some intra-uterine disease; if so, why the scars, the symmetry, and no lesions elsewhere?

To sum up, from our present knowledge no satisfactory explanation can be advanced.

(*Exhibited January the 18th, 1901.*)

### Discussion.

**Mr. Abbott** said he thought the irregularity in the femur must be attributed to fracture; the femoral scar was definitely adherent to the bone beneath. It was, he thought, a compound fracture so far as the child was concerned. Regarding the tibia, the curve was very gradual; there was nothing abrupt about it, and he did not think both legs were fractured. He regarded the scars on the tibia as pressure scars occurring where they might be expected, namely, on the convexity of the curve of the tibia. His view was that the child had had a fracture of the femur *in utero*, probably compound, and that the other scars were pressure scars. It was, of course, unsatisfactory to give an explanation which assumed different causes for the two scars.

**Mr. Clement Lucas** said, after carefully examining the case, the conclusion he had come to was that if the explanation of the thigh condition was a compound fracture *in utero*, there was no doubt that the scars on the tibia, with the thickened bone beneath, and the pit over the fibula with the thickening underneath, must be explained in the same way. He could not say whether the explanation given was the correct one, but he thought the same explanation must be applied to both femur and fibula. Possibly there was some arrest of development occurring in those situations. One read of most curious complications, with narrow constricting bands *in utero*, which were differently explained by various writers. Some thought the arrest was due to some cause associated with the nervous system, while others regarded the cause as purely mechanical. It looked, in the present case, as if at an early period there was a compound fracture of the tibia and fibula as well as of the femur. He felt no doubt that they were all owing to the same cause.

**Mr. Robinson**, in reply, said that whatever was the true explanation of the condition of the femur, he could not subscribe to the view that the tibia and fibula had been damaged by fracture; the symmetry was absolutely against it. That, of course, was different from saying what the explanation really was, which was not an easy matter.

24. A CASE OF IMBECILITY ASSOCIATED WITH AN ABNORMAL DEGREE OF SUBCUTANEOUS FAT.

By GRAHAM LITTLE, M.D.

(INTRODUCED.)

THE patient, Alice G—, aged 6 years, had been under observation for two years. In October, 1898, her weight was  $52\frac{3}{4}$  lbs. She was then unable to walk or talk. Her teeth were very decayed. She had never had any fits. The mother had been in labour for twenty-seven hours when confined of this child, but no instruments had been applied. In February, 1899, her weight was 36 lbs., and she began to walk at this time. For the previous six months she had been attending pretty regularly, and had been taking one grain of thyroid extract twice daily. In April, 1899, her weight was still 36 lbs., and she was beginning to say a few words. She left off treatment for a year, and returned in May, 1900. She was then again very fat ; her weight was  $54\frac{1}{2}$  lbs. She walked with a waddling gait. The knee-jerks were normal. The fundi and discs were normal. There were no stigmata of degeneration, except that the palate was highly vaulted, and the hands coarse, with spatulate fingers and harsh skin. The widest circumference of the cranium measured 20 inches ; there was no abnormality in the shape of the head. Her height was  $37\frac{1}{2}$  inches. She could form no sentences, but could ejaculate words of simple character. Her urine, but not her faeces, was passed in the bed. The bowels were constipated, and, indeed, did not usually act without artificial aids. She was again put on thyroid extract (two grains thrice daily) ; the dose was increased to three grains thrice daily about six weeks later. For the next six months she was seen every month. In December her weight was  $38\frac{1}{2}$  lbs., her height  $40\frac{1}{4}$  inches. She could now talk in

short sentences and ask for things around her, and the bowels were very regular—a great relief from the previous habitual constipation. The pulse, under thyroid treatment, averages about 100.

The improvement effected by the treatment is very marked, and when this has been intermittent the set-back is evident. The mother has come to consider the putting on of fat during these intervals as an indication to renew treatment, all her faculties improving as the fat diminishes. The case is difficult to class, and it seems desirable to obtain further opinions on it. There is no appearance of cretinism, and the thyroid gland seems normal.

The case was brought up as a companion one to that shown by Dr. Morley Fletcher. She had increased in height three inches during the last nine months, and had lost nearly a stone in weight. The habits of the child were now very much better. It seemed to be a case based on the same cause as cretinoid imbecility. He did not feel certain whether he should continue the thyroid treatment.      *(Exhibited January the 18th, 1901.)*

#### Discussion.

**Dr. Fletcher Beach** asked whether the child was born at full term, and whether there was anything of the kind in the family history. He suggested that the child should be sent to one of the special schools which had been established in London. The London School Board had between thirty and forty such schools, and mentally deficient children were educated at them with great success.

**Dr. C. W. Chapman** urged that such children should not be allowed to walk much, as there was a tendency for the bones to yield under the weight of the body.

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## 25. A CASE OF PITYRIASIS RUBRA PILARIS OF DEVERGIE.

By GRAHAM LITTLE, M.D.

(INTRODUCED.)

THE extreme rarity of this disease may make the case acceptable in spite of its somewhat restrictedly "special" character. The patient, Edith D—, has had the disease for eighteen months. When first seen it was almost universal in parts where hair is developed. The appearance was not unlike that of a chronic and universal psoriasis, from which it was, however, at once distinguished by inspection of some of the individual follicular papules. A microscopic specimen demonstrating the pathology of the disease was shown. The horny cells of the stratum corneum are ill-developed, the condition of "parakeratosis" (Unna) resulting, and the hair-follicles, in their distal extremities above the orifices of the sebaceous glands, become blocked with these imperfectly cornified cells, and form the characteristic papule—a hard, shotty, acuminate swelling, giving the aspect of exaggerated permanent "goose-skin." There is no inflammatory reaction around these blocked follicles, and there is no dilatation of the blood-vessels of the corium as is the case in psoriasis. The condition has improved very greatly under the administration of thyroid extract combined with local application of glycerine; there are now only a few rebellious patches of acuminate papules on the buttocks, back of the neck, anterior fold of the elbow, posterior and lower third of the forearm and backs of the hands, the knees, and dorsa of the feet.

It was an exceedingly rare affection; not more than half a dozen cases had been described up till a short time ago, and a dermatologist of very long experience, Dr. Brook of Manchester, had only seen one case;

Dr. Crocker had seen only two. Since that time, however, several cases have been shown before the Dermatological Societies. While the patient was under thyroid her pulse rate rose a little, but there was no grave disturbance. *(Exhibited January the 18th, 1901.)*

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#### 26. A CASE OF TOTAL NECROSIS OF THE LOWER JAW; RESULT.

By F. C. ABBOTT, M.S.

THE case was that of a boy aged 5 years, from whom the whole lower jaw had been removed for total necrosis. The acute disease had occurred nearly four months before the sequestrum was removed, and was not due to any specific fever, nor to poison, such as phosphorus.

The whole jaw had been easily removed in two halves, leaving the periosteum. The only portion left behind was the left condyle with part of its neck. The operation was four months ago. A complete new ring of bone had been thrown out, including a new condyle. The movements were perfect and the shape good. There were already muscular ridges to be felt on the new bone.

Mr. Abbott emphasised the great rapidity with which the new bone had been formed, and the importance of fitting a plate of teeth so that the new jaw, by having function, might develop with the growth of the boy.

*(Exhibited January the 18th, 1901.)*

#### Discussion.

**The Chairman** (Dr. Dawson Williams) thought Mr. Abbott was to be congratulated upon the excellent result of his operation.

**Dr. C. W. Chapman** suggested that the necrosis arose from bad teeth. He thought the moral conveyed by the case was

the necessity of removing bad teeth in children as quickly as possible.

**Mr. Sidney Spokes** asked how Mr. Abbott intended to mould the jaw. He (Mr. Spokes) thought the action of the muscles had brought about a better result than any artificial procedure would. The constant action of the fleshy tongue would develop the mandible.

**Mr. Abbott** said, in reply, that he was afraid the action of the muscles of the tongue would be to draw in the arch too much; and that was what had happened. He had put his fingers inside the child's mouth every day and pulled forward the arch, so as to make it as large as possible. If he could have continued it a little longer it would have improved upon nature.

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## 27. A CASE OF CHRONIC INTERSTITIAL NEPHRITIS IN A GIRL AGED SEVEN YEARS.

By LEONARD GUTHRIE, M.D.

A GIRL aged 7 years and 3 months was admitted to Paddington Green Children's Hospital on January the 6th, 1893, with the diagnosis "chronic uræmia." She had been for a fortnight under my care for the treatment of headache and vomiting, and I had noticed that her heart was displaced outwards and downwards, that her pulse was of high tension, and that her urine contained one twelfth to one eighth albumen, and its specific gravity was 1006.

Her mother gave the following history:—She was weakly as an infant, and suffered from diarrhoea and vomiting until weaned at twelve months. Her health then improved, and with the exception of measles "when quite young" she had no illness until two months before admission. She then became subject to attacks of frontal headache and vomiting, which occurred two or three times a week, mostly in the early morning, and lasted an hour or so. She often cried or even shrieked with pain. On getting up she felt giddy, and shook and staggered, so that she fell unless her mother held her. Sometimes

she complained that she could not see. Vomiting often occurred after taking food, and was preceded by retching and nausea, both with and without violent headache. The vomit consisted of food and yellow or green frothy matter. She generally slept well, but sometimes awoke screaming with headache. Since her illness she had been passing an increasing amount of urine. Her appetite was good and the bowels were regular. The father died of rheumatic fever and "some brain trouble." The mother was fairly healthy, but was "subject to fits," and had six miscarriages at varying intervals. Two children had died of scarlet fever. Four children were alive, two of whom had had rheumatic fever.

On admission she was thin and undersized. Her complexion and skin generally were sallow and dirty-looking. Her eyes were sunken, and surrounded by dark circles; the conjunctivæ were singularly pale, and the pupils were large. Her hair was dark and luxuriant; her skin was coarse and dry, and there was capillary congestion. No trace of œdema could be found. The finger-nails were somewhat clubbed. She appeared dull and listless, and wore the look of habitual suffering. The fundus oculi and lungs were normal. The heart's apex-beat was in the sixth space, just outside the nipple line. The first sound at the apex was impure, with a doubtful presystolic element. The second sound was accentuated, and was followed by a slight diastolic whiff, heard more markedly at the aortic base. The pulse (90 to the minute) was very small, hard, and thready, and of extremely high tension. The brachial artery could be rolled under the finger as a hard small cord. The tongue was broad, pale, moist, and somewhat furred posteriorly. The pharynx was congested, and the uvula large and pendent. The liver and spleen were not enlarged. The urine was pale straw-coloured; sp. gr. 1010; neutral; albumen one half.

On January the 10th she cried with headache once or twice, but was not sick; she seemed drowsy. She passed thirty-four ounces of urine in twenty-four hours;

sp. gr. 1010; neutral; albumen, one third. An abundant white deposit of triple phosphates, a few granular cells, and granular casts were present.

On January the 17th she was sick occasionally, but the headaches seemed less severe. In the afternoon, shortly after atropine drops had been put into the eyes for the purpose of ophthalmoscopic examination, the headache became intense. She appeared distracted with pain, and later became unconscious. The eyes were fixed and staring, and she foamed at the mouth. Twitching of the right facial muscles, of the right arm and leg, and of the abdominal muscles on both sides followed. Afterwards the left arm twitched, but not the leg. Twitching was followed by rigidity and flexion, first of the right arm, and then of the right leg. The breathing was very shallow, and of Cheyne-Stokes variety. The pulse, at first slow, became very rapid and feeble. Inhalation of chloroform stopped the fit. This had to be repeated, after which there was no recurrence. On coming round she complained of thirst, but not of headache. She seemed rather deaf, and had a wild look, but appeared to understand what was said to her. There was no incontinence of urine or faeces during the fit, which lasted about half an hour. On this day only 25 oz. of urine were passed, and on January the 18th only 14 oz., containing albumen  $\frac{1}{8}$ ; granular and hyaline casts as before. Vomiting and headache continued. On January the 19th the amount of urine rose to 50 oz. She cried out at times, but seemed peevish rather than in pain.

On January the 20th the urine increased to 84 oz. It contained very little sediment and much less albumen. There was no sickness, or headache, or crying out. She was wasting rapidly. The cardiac apex-beat was forcible. The first sound was "murmurish." The second sound was accentuated, especially at the base. There was diminution of expansion on the right side of the chest. The percussion note was impaired in the right supra-scapular fossa. The breath-sounds were somewhat tubular, with inspiratory

and expiratory crepitations. Some rhonchus was audible all over the right lung.

On January the 24th 64 oz. of urine were passed, sp. gr. 1012, alkaline, smoky, and containing for the first time a distinct trace of blood.

On January the 30th she had headache during the night. At midday she seemed strange in her manner, and told one of the children in the ward that she wanted poison to drink. Shortly after she seemed stupid and unable to realise what was said to her.

At 4 p.m. she had another fit, in which there was loss of consciousness, lividity, and foaming at the mouth. The breathing was at first stertorous, and later shallow (Cheyne-Stokes type); the pulse 150 to the minute, small and irregular. The right side, again, was chiefly affected. The eyes were widely opened and turned to the right. The pupils were fully dilated, and there was horizontal nystagmus. The right arm was first flexed across the chest, then twitched violently, and became rigid. Then the right leg became flexed and rigid at the knee and hip. The right chest was rigid, expansion being almost entirely on the left side. The abdomen was much retracted.

Under chloroform the breathing became fuller and more even. The spastic movements and rigidity disappeared. The pulse fell to 128 to the minute, and improved in volume. Ten minutes after the chloroform had been withheld the fit returned. The eyes again turned to the right. The eyelids twitched, and there was nystagmus. The right arm and leg were affected as before, in addition to the left leg. Under chloroform the symptoms again subsided. They returned again in ten minutes, but were finally quelled by administration of chloroform for the third time.

She then slept for a short time, and on awakening seemed deaf and dazed. She cried out that her head hurt her, but she ceased to cry when addressed sharply and loudly. Only 18 oz. of urine were passed on this day. There was no incontinence during the fit.

On the following day (January the 31st) she again passed only 18 oz. of urine ; but on February the 1st she passed 73 oz., and on the 2nd 106 oz. Sp. gr. of the urine 1010 ; pale, acid, containing one fifth albumen, and no deposit.

Her mental condition was curious. So long as an attendant was with her she was quiet, but if left alone she would shriek incessantly, " Cannot see," or " My head aches." It was difficult to ascertain whether she was actually in pain. She screamed throughout the friends' visiting hour, and seemed quite unconscious of her surroundings ; but when the visitors had gone she told the other children in the ward that she " knew all that was going on." She disturbed the whole building with her cries at night ; but when the house physician, Dr. McIlraith, was called up to see her, she was silent while he remained with her.

She wasted rapidly. There was never any trace of oedema, but the skin of the abdomen became wrinkled and inelastic, and the abdomen itself retracted.

On February the 4th the urine again contained blood. Only 22 oz. were passed during the twenty-four hours ; sp. gr. 1014 ; albumen, half. The temperature rose from 97° F. to 102.2° F. On this day also there was some left-sided paresis of the face, arm, and leg. The tongue was protruded to the left. The pupils were equally dilated. The left side of the chest hardly moved at all in respiration. The breath-sounds were feeble and somewhat tubular, and accompanied by some rhonchus and crepitations. She had difficulty in swallowing. The knee-jerks were absent.

Next day the hemiparesis had also disappeared. She moved the arm and leg, and both sides of the chest worked equally. She seemed unable to see. There was apparently abdominal tenderness. She swallowed quite well, and complained of thirst.

On February the 7th the paresis had entirely disappeared, except that the right naso-labial fold was more marked than the left. The cardiac apex was now one inch

outside the nipple line and in the sixth space. The first sound was impure, the second accentuated. The pulse was small, hard, and irregular. The respiration was shallow, twenty-two per minute. Urine was passed involuntarily. She was semi-conscious, but during the day put out her tongue when asked to do so. She continued to scream at intervals, but gradually the screams became less frequent. Coma supervened, and she died at 5 a.m. on February the 8th. The temperature at the time of death was 103.8° F.

*Post-mortem examination.*—Fourteen hours after death rigor mortis was still present. The body was extremely emaciated; there was very little fat in the thoracic and abdominal walls. There was no trace of oedema. There were some small purpuric spots over the sacrum, and also one on the forehead (*ante-mortem*). There was general brownish-yellow discolouration of the skin.

There was a slight amount of clear fluid in the pericardium. There were no adhesions. The heart generally was large. The left ventricle was extremely hypertrophied and slightly dilated. Both auricles and ventricles contained some amount of fibrinous clot formed *in articulo mortis*. The valves were healthy.

There were neither fluid nor adhesions in the pleural cavities. At the left apex of the left lung a small, hard, cheesy, tubercular mass, the size of a hazel-nut, was found. The lung around this was somewhat puckered. The rest of the left lung, and also the right, were healthy.

The liver was somewhat congested; otherwise it looked healthy.

The spleen was normal in size and appearance.

In the kidneys there was considerable inflammatory matting of the perinephritic cellular tissue. Both kidneys were distorted, puckered, and shapeless. The capsules were adherent in parts, but not universally so. The distortion of the kidneys was most marked where the capsules were most adherent. On section they were coarse, tough, and mottled yellow in colour. There were a good

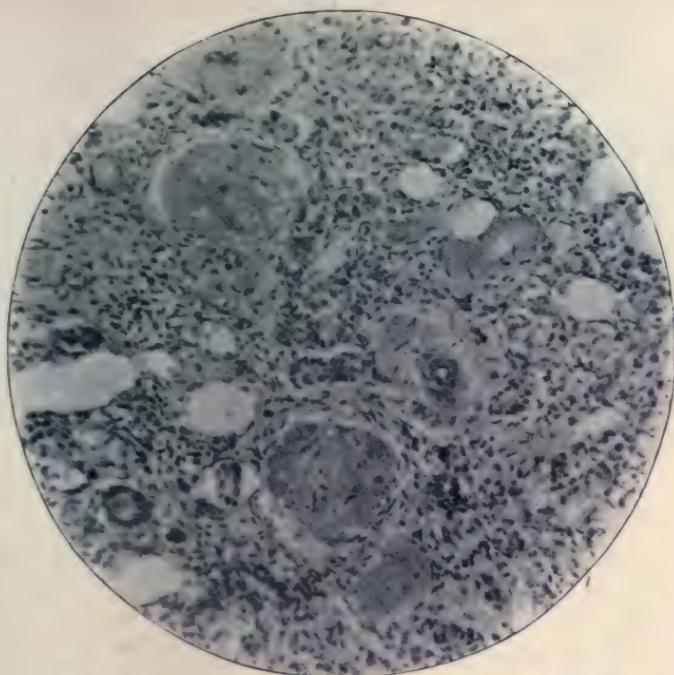


FIG. 5.—Section of kidney. *a.* Small cyst. *b.* Hyaline degeneration of Malpighian body.

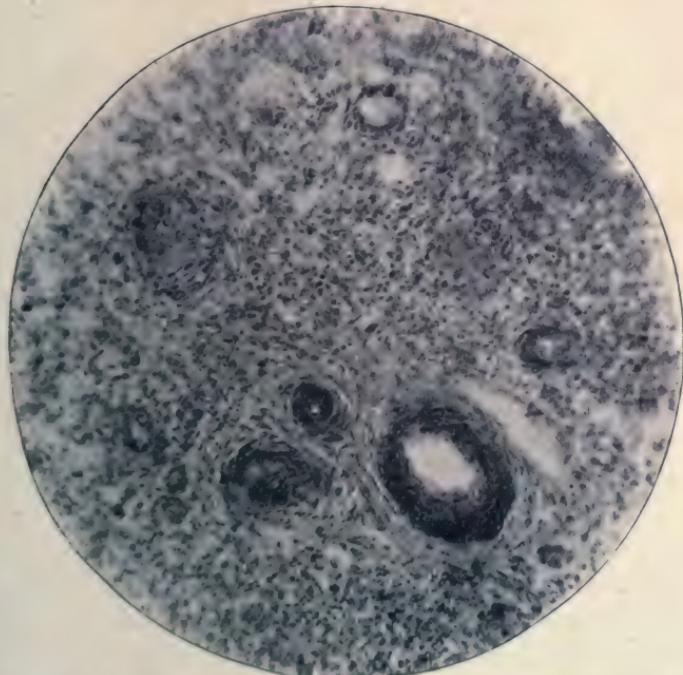


FIG. 6.—Section of kidney. *a.* Thickened vessel with lumen almost occluded. *b.* Fibroid tissue.

many small haemorrhages scattered in their substance. There was little apparent distinction between the cortex and medulla, but the cortex, where it could be identified, was atrophied. The left kidney weighed  $1\frac{1}{4}$  oz. Its pelvis was dilated, but not the ureter, and there was no obstruction to the entry of the latter into the bladder. The right kidney weighed  $3\frac{3}{4}$  oz. Its lower portion was shrunken and irregular. The upper part was firm and more normal in appearance than any portion of the kidneys elsewhere. *Microscopically* the sections showed general diffuse increase of interstitial tissue. In parts of the supporting stroma there were disseminated patches of cellular infiltration, suggesting a more recent interstitial inflammation supervening on a fibrosis of old standing. The capsules of the glomeruli were in many places thickened by fibrosis, and also surrounded by more recent infiltration of inflammatory cells. Some of the glomeruli were only represented by patches of opaque hyaloid material, which did not stain well. Some of the arterioles were patent, yet all their coats showed considerable hypertrophy, such as almost occluded the lumen of others. The tubular epithelium in the places which showed presumably recent interstitial inflammation was cloudy and opaque, and showed a marked tendency to fall out, leaving empty spaces or minute cysts. In some places the epithelium seemed healthy, but for the most part it was granular. Numerous punctate haemorrhages were visible to the naked eye in the sections, and also under the microscope. The condition of the kidneys may be described as one of diffuse interstitial nephritis, both of old standing, and apparently of recent date. The parenchymatous changes were less marked than the interstitial, and probably were secondary to them. They cannot be regarded as typically granular kidneys, but there can be no doubt that they were in the way to become so generally, as they had already become so in parts. The supra-renal capsules were unfortunately not examined microscopically. They appeared, however, to be normal, except that they

were involved, especially the left, in the inflammation which affected the perinephritic cellular tissue.

The brain was large and well developed. The blood-vessels were generally engorged. The arteries at the base were patent, but not obviously thickened. There were no miliary aneurisms. The posterior part of the right vertex was darkly discoloured behind the level of the

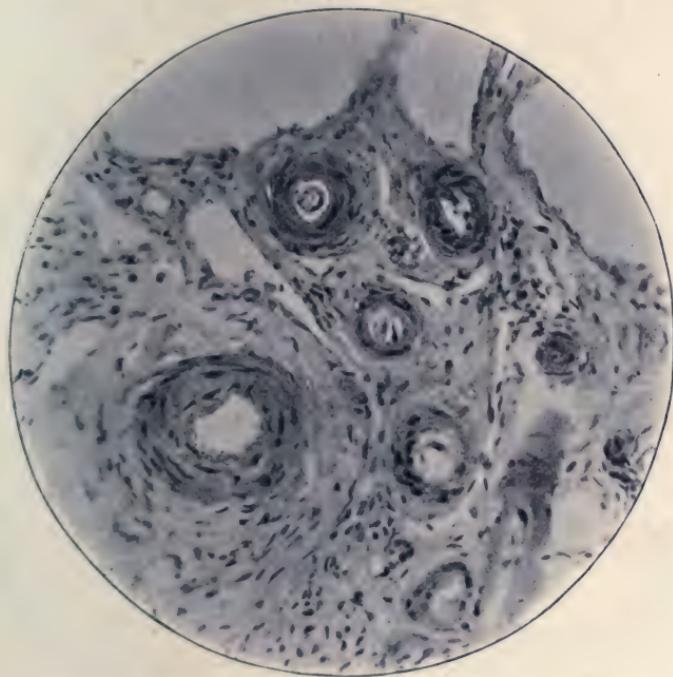


FIG. 7.—Section of kidney showing thickening of vessel walls.

ascending parietal convolution. On making the usual sections, a haemorrhage as large as an egg was found in the right centrum ovale majus; it was beneath the level of the grey matter. At a lower level than this was found a second haemorrhage, as large as a golf ball, in the right occipital lobe; it extended within a couple of lines of the external cortical surface of the brain. The central portions of the clots were brick-red in colour and fibrinous,

but externally the blood seemed more recently extravasated, being dark and semi-fluid. No source of the haemorrhages could be discovered. In addition to these haemorrhages there were several others in various portions of both hemispheres. They varied in size from a pin's head to a



FIG. 8.—Section of brain showing haemorrhage, size of hen's egg, in posterior part of right centrum ovale majus.

pea. None of large size were observed in the left hemisphere. *Microscopically* there was general capillary congestion of the brain. The walls of the arterioles, both meningeal and cerebral, were unmistakably thickened in all three coats, which appeared fluffy or woolly, and ill-

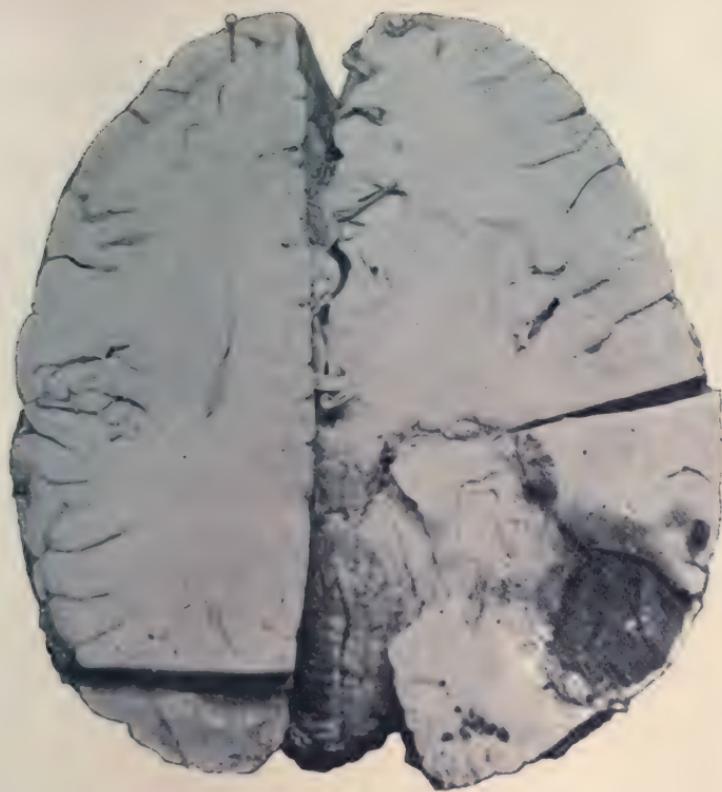


FIG. 9.—Section of brain showing haemorrhage, size of golf ball, in right occipital lobe.

defined. In some places minute haemorrhages were found in association with small vessels (arterioles), which had apparently burst.

The history, course, and termination of this patient's illness, her symptoms and physical signs, would be common enough in adults upwards of fifty, but are very rare in children under fourteen. In a paper on "Chronic Interstitial Nephritis in Childhood," published in the 'Lancet,' vol. i, 1897, I collected eight similar cases to the present. The youngest patient was five years old. Another instance, in a girl aged twelve years, has been recorded by Sutherland and Lawson ('Trans. Ophth. Soc.', vol. xix, 1899). The symptoms in all cases were much alike. They were chiefly uræmic, characterised by frequent attacks of headache and vomiting, amaurosis and giddiness. Sometimes tetany, cramps, and opisthotonus were noted. Convulsions and coma occurred in six. Cardiac symptoms, such as palpitation, dyspnoea, and praecordial pain were met with in three. Gastro-intestinal symptoms, such as diarrhoea, epigastric and abdominal pain, were not uncommon, and also symptoms of bronchial catarrh and pulmonary oedema. Great thirst, with or without voracious appetite, was noticeable in some. The urinary symptoms were polyuria and often enuresis, the urine being of low specific gravity, and containing albumen, hyaline and granular casts, and occasionally blood.

The physical signs were progressive wasting, the skin becoming dry, wrinkled, discoloured, or even pigmented, as in Addison's disease, and anaemia. The cardio-vascular signs consisted in gradually increasing hypertrophy of the heart (especially of the left ventricle), high pulse tension, and general thickening of the arteries. In some, hypertrophy of the heart gave way to dilatation, but only in one (Sutherland and Lawson's) was incompetence sufficient to produce extreme dropsy of the cardiac type. In all the others but one dropsy was absent from first to last, and in the exceptional case it only occurred shortly before death, and was limited in extent.

Albuminuric retinitis was only discovered in one case (Sutherland and Lawson's).

The duration of the disease, counting from the onset of symptoms, varied from three weeks to five years. In my own case the duration was three months.

The cause of death in four out of nine cases was intracerebral haemorrhage. The percentage of deaths from this cause may be compared with that which obtains in adults. Dickinson stated that 41 per cent. of all cases of cerebral haemorrhage were due to granular kidney; Pye-Smith gives 75 per cent.; the statistics of St. Bartholomew's Hospital, however, only show a mortality of 15 per cent. from this cause (West, "Some Clinical Aspects of Granular Kidney," "Trans. of Med. Society," 1899, p. 172).

Intra-cerebral haemorrhage in young children is of course extremely rare, although meningeal haemorrhage is not uncommon. In the latter case it is usually capillary, and associated with infantile scurvy, purpura, and congenital syphilis, apart from the well-known supracortical haemorrhages due to injury at birth. But intra-cerebral haemorrhage in infants and young children, as in adults, is probably always caused by disease of larger vessels than the capillaries. It is impossible that healthy vessels should burst, however forcible the heart, and however high the arterial tension may be.

In some cases miliary aneurisms have been found, dependent on embolism following endocarditis. General tuberculosis has been present in some. In seven fatal cases atheroma of the cerebral arteries was discovered. In two of these (Filatoff's and Dickinson's) contracted kidneys were also found, and we may add to these the present case and Sutherland's and Lawson's, in which there can be no doubt that general arterial degeneration, akin to that found in adult subjects of granular kidney, existed. Hence we may conclude that the chief cause of cerebral haemorrhage in children, as in adults, is granular kidney. The cause of death in most of the other cases

of chronic interstitial nephritis was uræmia, ending in convulsions and coma. In one instance death is said to have been due to gradual exhaustion, in another purulent peritonitis closed the scene.

An interesting point in the present case is that the convulsions were almost entirely confined to the right side. They were nevertheless uræmic, the left side escaping owing to the partial hemiplegia caused by the haemorrhages in the right hemisphere. As in adults, uræmic convulsions are of far graver import in interstitial nephritis than in the parenchymatous variety.

*Diagnosis.*—There can be no difficulty in diagnosing a well-marked case. The disease runs a typical text-book course, and the physical signs and symptoms are precisely the same as in adults suffering from granular kidney. Difficulty will only be experienced in the early stages, and the cases for which they are most likely to be mistaken are those associated with the so-called uric acid diathesis in children. Such children are often thin and undersized ; they suffer from severe headaches, the pulse tension is often abnormally high, the urine is often scanty, high-coloured, and acid. There may be albuminuria, intermittent or cyclical, and the presence of blood, free or in casts, in the urine is not uncommon. The chief points of distinction besides the differences in urine are, that in interstitial nephritis there is not only high pulse tension, but the vessels are thickened and hard ; whereas in uric acid cases, although the tension may be high, there is no thickening of the vessel walls.

The prognosis in uric acid cases must, however, always be guarded, and must be left for the next generation to decide.

*Causation.*—Dickinson gives as the causes of granular kidney, gout, lead, alcohol, cardiac changes leading to renal congestion, pregnancy, obstructional anuria, mental conditions, worry, etc., perhaps intermittent fever, and “a general fibrotic tendency affecting many organs and tissues, notably the arteries and kidneys.” This last is

rather a statement of a fact than an explanation of its occurrence, yet it is important as an observation that interstitial nephritis is no merely local disease of the kidneys, but a disease which affects the entire arterial system as well. In the case of all the children the other causes may be dismissed.

Scarlatina naturally occurs to every mind as a likely cause in children, but it may be positively excluded in most, though not all, of the cases. And even when a history of scarlatina has been forthcoming, the whole course of the nephritis is so unlike the ordinary post-scarlatinal variety that we are justified in seeking some other explanation. Similarly, we cannot regard the kidneys as being in a final or contracting stage of parenchymatous nephritis, for there is no history of symptoms suggesting the pre-existence of large white kidney. We must go far back into the life-history of the patient to find a probable origin of the disease; for in children and adults alike the changes found in the kidneys and vascular organs in interstitial nephritis are obviously of longer standing than the symptoms.

It may be that in old and young alike granular kidney is the result of a more or less acute interstitial nephritis occurring in infancy. Such acute interstitial nephritis has been described by Emmett Holt ('Arch. of Pediatrics,' 1897, vol. iv, p. 1) in five infants aged between two and a half months and two years. The condition was verified post mortem, but the symptoms were not in most cases suggestive of nephritis. They were usually gastro-intestinal or cerebral. Dropsy was absent in all, and the urine did not in all cases afford a clue to the nature of the complaint.

It is quite conceivable that subacute attacks in infancy may set up a continuous and insidious process of degeneration or inflammation, ending more or less late in life in granular kidney. The cause of such intestinal nephritis in infancy is obscure. Holt considers scarlatina as non-proven in his cases. Chill has been suggested as a cause,

but were this so the disease would certainly be less rare than it is.

Attention has recently been drawn to syphilis—both congenital and acquired—as a cause of granular kidney and its associated cardio-vascular changes. Amongst recent writers Drs. Fordyce and R. H. Greene have described cases occurring in the acquired syphilis of adults which are indistinguishable from those of ordinary interstitial nephritis ('Journ. of Cut. and Urinary Diseases,' April, 1897, and p. 12, 1898); whilst Massalongo, of Verona (Int. Med. Congress, Rome, 1894; 'Med. Rec.', April the 28th, 1894), described very completely a case of interstitial nephritis in a syphilitic infant aged eight months. Uræmia was the cause of death, and endo- and peri-arteritis, typical of interstitial nephritis, were found both in the kidneys and in the liver and spleen. He concluded that "in precocious syphilis of the kidneys the anatomical changes of interstitial nephritis may occur without a previous stage of the parenchymatous lesion;" and also "that syphilitic infection, at least the congenital variety, may primarily compromise in an acute manner the arterial system, and produce in consequence dystrophic alterations in various organs."

Although I have not been able to verify by post-mortem examination the existence of interstitial nephritis in syphilitic infants, I have frequently suspected it. Syphilitic infants—especially those in whom cutaneous eruptions are prominent—often thrive for a few weeks on mercury; then, when the improvement manifested has caused general satisfaction, they are seized with convulsions and die. The probability that such convulsions are uræmic, and determined by the action of mercury on syphilitic kidneys, already inadequate, is worth consideration. In its favour I may say that some years ago, after a series of such accidents amongst out-patients, I took to giving mercury with less freedom and greater caution than I had used before, with the result that the mortality in my practice was considerably lowered.

As regards the older children with whom this paper deals, the evidence of hereditary syphilis is not conclusive. In my own fatal case there was no definite history of syphilis, but the child's mother had had six miscarriages. The father died of "some brain affection," which might or might not have been due to syphilis, and the child herself had the stunted wizened appearance common in congenital syphilis. In the other cases the possibility of a syphilitic origin does not seem to have occurred to the observers.

On the whole, although evidence is far from being conclusive, I am inclined to think that chronic interstitial nephritis in young children is due to hereditary syphilis; and, if so, hereditary or acquired syphilis may also account for many cases of granular kidney in adults.

Significant facts in favour of such a view are that granular kidney is very frequently found on post-mortem examination of the insane. Beadles found it in 70 per cent. of cases dying at Colney Hatch ('Journ. of Men. Science,' January, 1895). Also the highest mortality at asylums occurs amongst general paralytics,\* and it is almost universally held at the present time that syphilis is *par excellence* the cause of general paralysis. Hence it is not unreasonable to assume that syphilis is also a more frequent cause of interstitial nephritis or granular kidney than is usually suspected.

It is open to question whether gout and lead are actual causes of granular kidney. It may be that the subjects of granular kidney are specially liable to suffer from gout

\* Beadles (op. cit.) gives the following percentages of causes of death at Banstead, Cane Hill, Hanwell, and Colney Hatch as follows:

General paralysis	=	25.69 per cent.
Renal disease	=	1.27 "
Arterial degeneration	=	3.94 "
Cardiac disease	=	5.51 "
Chronic brain disease	=	15.39 "
Senile decay	=	8.38 "

It will be noticed that nearly all these conditions are in keeping with the existence of granular kidney.

and plumbism, owing to renal inadequacy. As regards alcohol, again, which is always considered to be the most potent agent in producing granular kidney, it is possible that alcoholism is the result rather than the cause of the nephritis. A prominent symptom of interstitial nephritis is polyuria, and polyuria naturally begets thirst. Thirst is quenched by alcohol, and alcohol results in drunkenness. A Scottish drunkard defended his evil habits by saying, "Ae body kens o' my druckenness, but naebody kens o' my drouth."

[For the careful notes of this case I am indebted to Dr. C. H. McIlraith, late House Physician to the Children's Hospital, Paddington Green.]

(*Read January the 18th, 1901.*)

### Discussion.

**Dr. Sutherland** said he was interested in Dr. Guthrie's theory as to syphilis. Did he mean that syphilis was the probable cause of this case, or that it was the universal cause of similar conditions? In certain cases they would be prepared to admit that syphilis was a possible cause, but he was not prepared to sweep all the cases into that net.

**Dr. Sansom** said it seemed to him that the observation regarding the prevalence of granular kidney in lunatic asylums was susceptible of the following explanation. The majority of the inmates were suffering from some sclerosis in the central nervous system, and the disease of the kidney was essentially a sclerosis of that organ. It did not follow that the sclerosis was not in other parts of the system; and it was sometimes more marked in one part than in another. The communication was a most valuable contribution to the study of interstitial nephritis. Such cases were very rare in children, but, as far as he knew, all of those recorded had been associated with intra-cranial haemorrhage. The only addition he had to make to the observations of Dr. Guthrie was that the disease sometimes began in the pelvis of the kidney. A stone in the kidney would sometimes produce it. He quite agreed that the idea of it having its origin in any form of parenchymatous nephritis was wrong. In 999 out of a thousand cases the onset of interstitial nephritis, whether in the child or in the adult, was occult and very insidious, and it was often associated with sclerosis in other parts of the body. The secretion from the kidney offered only a small part of the material which they had for diagnosis, for

the nature of the case was recognised by the cardio-vascular symptoms. Blood-pressure in the kidney was a very variable condition. The diagnosis was often made from the urine alone, and such a course was productive of much needless mental distress. He believed Dr. Guthrie would agree with him, in regard to the case he had related, that the important feature was the cardio-vascular changes, and it was that which led to the fear of the adverse progress of the disease. It was so, and more so in children than in adults. But whether speaking of aetiology or diagnosis, he urged great care in the use of the term interstitial nephritis.

**Dr. Leonard Guthrie**, in reply, said he did not lay down a law regarding syphilis as a causal factor in the condition ; he simply meant that syphilis, both congenital and acquired, might be a more frequent cause of so-called granular kidney than was generally supposed. With regard to the evidence of that in the present case, there was none, except that the mother had six miscarriages. The father died of some disease which, from the description, might have been syphilis. This case and Dr. Sutherland's both had the facies of syphilis, and it was the facies which led him to suspect syphilis. He agreed with Dr. Sansom that some of the cases began in the pelvis of the kidney, and that was very often due to the obstruction of a small stone getting down near to the bladder. But he did not think that was quite the same as what was regarded as interstitial nephritis, because it was a septic condition, and in such cases he did not think the cardio-vascular changes were marked.

**Dr. Theodore Fisher** (Bristol) sent a letter and a sketch, the latter of which was passed round for inspection.

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## 28. THE TREATMENT OF INGROWING UPPER TEETH.

By SIDNEY SPOKES.

THE normal articulation of the teeth in the mandible with those of the maxilla is a matter of more importance than is usually recognised. Further, it may probably be

said that few practitioners know what the normal articulation is. For instance, one has read in a hospital report of a jaw case that the patient was discharged well, except that the upper front teeth slightly overlapped the lower ones—which is precisely what they should do. The outer cusps of the back teeth in the mandible should also close just inside those of the upper. There are other arrangements of cusps, which have equal importance when considered from the functional point of view, but the few remarks I now venture to make have reference to the treatment of irregularity of the front teeth, and especially to that variety which consists of a shutting inside the dental arch of one or more upper teeth, the cutting edges of the corresponding lower teeth closing in front of them. This state of things, besides being unsightly, tends to interfere with the lateral movements in mastication, and should receive treatment. An upper tooth may erupt inside the arch in consequence of general crowding of the teeth in a small maxilla, but a very common cause is to be found in the undue retention of a temporary tooth. It is therefore a matter of importance that children's mouths should be kept under observation, especially during the change of dentitions. A systematic inspection should be made at least every six months.

The usual method of treatment adopted to bring into line an ingrowing front tooth is to have a vulcanite plate made to cover the palate. The plate is made to fit behind the necks of the teeth and opposite the misplaced tooth a wooden peg or wedge is inserted into the plate, and is renewed from time to time as the tooth is gradually pushed forward, until its cutting edge finally closes in front of the lower tooth. There are other mechanical methods of advancing such misplaced teeth, but they all have the disadvantage of requiring apparatus fixed in the mouth ; so that in recent years it has seemed to a few practitioners that where there is any reasonable space between the neighbouring teeth, one of these shut-in teeth may be forcibly advanced in one operation, by a

suitable instrument, to the place where it is wished that it should be. And the results seem to justify what at present is perhaps not regarded as orthodox treatment.

Models of three cases were shown, and the instrument used. (Read January the 18th, 1901.)

#### Discussion.

**The Chairman (Dr. Dawson Williams)** expressed the thanks of the Society to Mr. Spokes for his interesting demonstration, and the meeting terminated.

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### 29. A CASE OF COXA VARA AFTER SURGICAL TREATMENT.

By W. WATSON CHEYNE, C.M., F.R.S.

THIS was a case of coxa vara in a child ten years of age, on whom he had operated four years ago on the left leg in the following manner. A longitudinal incision was made on the outer side of the thigh at the upper part, the femur divided transversely below the lesser trochanter, and the limb rotated inwards, so that when fastened to the upper part of the femur it moved through the normal limits of rotation. The ends of the bones were fixed in this position by a perforated plate of aluminium embracing both, and fixed on by nickelled tin-tacks. This plate is still in, the position of the foot is normal, and the patient walks quite well with that leg. The right leg, which was not operated on, still shows marked external rotation, and it has not grown so fast as the left, being now one and a half inches shorter.

He had already brought before the Clinical Society a case of coxa vara treated in the same way as the present one. The case was interesting as showing the results

some years after operation. When he treated his first case the name coxa vara had not been invented, and he called it "external rotation of the femur," under which name it appeared in the 'Clinical Society's Transactions.' In that case he had considered what he could do for the child, as it could not walk; and it seemed to him that though he could not get the neck of the femur rectified, if he could get the leg below the trochanter in the proper position, probably the child would be all right. He operated in that case in exactly the same manner as in the present instance. In that case the patient came back three years later with an abscess at the spot, and he therefore removed the plate and nails, and the condition cleared up.

Since then another operation had been introduced for the treatment of coxa vara, but was applicable only to adults. It consisted of cutting down on the neck of the femur, and taking out a wedge of such direction and size as would enable one to rotate the femur in its proper position. But in a child he did not think that operation would be as satisfactory as the present procedure seemed to have been.

He had used aluminium plates similar to that mentioned for several fractures.

*(Exhibited February the 15th, 1901.)*

### Discussion.

**Mr. Clement Lucas** said the case shown by Mr. Cheyne was exceedingly interesting. The operation which had been described was generally known as Gants', though perhaps not used for the particular class of case now before them. Gants was the first to suggest division of the femur below the trochanters for the correction of certain cases of contracted hip in which the neck had disappeared. Adams' operation consisted of division of the neck of the femur for cases of deformed hips in which there was contraction. Both operations had been of the greatest service in correcting deformity of the hip-joint. The application of Gants' operation to the present condition

belonged to Mr. Cheyne, who had not only corrected the deformity so far as the rotation was concerned, but had considerably lengthened the femur. His own experience in operating on bowed femora was that a lengthening of two inches could be produced by the time healing was complete. When operating on cases in the Evelina Hospital it was found absolutely necessary, after taking out a wedge from a bowed femur, to operate on the other side also. The similar operation here suggested that the cause must be similar. He thought the chief part of the lengthening was due to the correction of the bone; and secondly, to the fact that the femur, having been put into its right angle for bearing weight, lengthened more according to normal growth than did a femur out of its proper direction. Where the femur was rotated and the limb was bowed in various directions the femur did not continue to grow normally, because the normal pressure was not in the proper axis. The new operation for adults was certainly an improvement on that under discussion, namely, attacking the neck of the femur itself. Therefore in operating in those situations they were following on Adams' lines.

**Mr. Jackson Clarke** said he was continually confronted with the class of case under discussion, and had at the present time twenty under his care at the City Orthopædic Hospital. The first set of ideas they brought to his mind was the relation between rachitic deformities and traumatic conditions. He had a gradation of cases from complete separation of epiphyses to slowly formed coxa vara deformities. In the worst of them a sudden onset from injury could always be traced; but in the slighter ones it was a gradual yielding of softened tissue, to which the ordinary strains of walking were traumatism. The deformity seen in fractures of the neck of the femur in adults gave rise to a somewhat similar condition, namely, eversion of the foot and adduction of the limb. In dealing with the cases in children up to the age of thirteen to fifteen he used orthopædic guiding means, and he had been very much gratified by the results. He had a light apparatus made for night use, so that the child could not sleep in the awkward position they tend to assume, *i. e.* with the feet placed at the sides of the face. In the daytime a light instrument reaching to the hip was worn, which prevented the feet from being everted; and by that means, together with passive and active exercises and general medical and dietetic measures, he had been surprised at the improvement which occurred. In this way most of the cases were so far improved that no operative treatment was called for. In the worst cases, such as that shown by Mr. Cheyne, some operative interference was necessary. In one case, that of a girl aged 15 years, he found, on having a good skiagram made, that

there was a complete separation of the head, although there was no grating clinically. The hip-joint was opened, the loose head removed, and, with a little shortening of the limb, the girl now walked about well and firmly. He had the light apparatus so made as to encourage adduction of both limbs, having a stop joint so as to prevent the child bringing the feet close together. In the more severe cases he believed the operation of removing a wedge from the neck of the femur was introduced by Kraske; and since that time Hoffmeister had suggested the substitution of intra-trochanteric osteotomy. His own experience of the latter operation was for fixed adduction left from hip-joint disease. In that condition he found it a very satisfactory proceeding. Most of the cases under his care were young and growing children, in whom he was using methods of guiding growth and improving the general nutrition. It would be some years before any of the cases became ripe for operation, but when that time came he would be inclined to try intertrochanteric osteotomy.

**Dr. Sutherland** asked what further treatment Mr. Cheyne proposed in the present case, as the condition was not a good final one; also with respect to the spine.

**The Chairman (Mr. Watson Cheyne)** said, in replying on the discussion, that he was aware Gants divided the femur below the trochanter for flexion or for adduction, but he did not think that surgeon used it for rotation. As a matter of fact he had thought out the operation himself without reference to Mr. Gants' operation. With regard to the intertrochanteric osteotomy, he thought it would be difficult to get enough rotation with it. He had to rotate for a considerable distance, from beyond a right angle to considerable inversion, before he could get the limb right. If they divided the bone between the trochanters he did not think rotation would be properly secured; the very obliquity would prevent rotation. (Mr. Jackson Clarke said the rotation was cured in his cases by instrumental treatment in a year or two.) Mr. Cheyne said he could believe that, because rotation had been improved very much in the present child in the leg on which he had not operated. With regard to lengthening the femur, naturally if they took a wedge out of a bowed leg they made it longer, but that was an immediate effect, and he was concerned with a remote one. His action was not much directed to the alteration of the bow, but to the rotation. He was at a loss to explain the lengthening which took place afterwards. He could not answer now Dr. Sutherland's question, as he had only that day seen the case again after an absence of two or three years.

## 30. A CASE OF MYXEDEMA IN A BOY AGED SIX YEARS.

By LEONARD GUTHRIE, M.D.

THE height of the child six months ago was two feet six inches, it was now three feet. The head was then large and rickety, and the anterior fontanelle was open, but it was now closed. The hair was thin, dry and sparse, and sandy; now it was lighter in colour, soft and silky. The complexion had changed from a flabby flush to a healthy pink appearance. The lower eyelids were then boggy, but were not so now. The teeth were cut, but they were small, short, and ill-developed. It would be interesting to notice whether the child would shed his early teeth rapidly, or whether he would retain them beyond the usual time. Six months ago the expression was dull, placid, and fatuous; now it would be seen to be very much more intelligent. There was no trace of the thyroid in the neck, but there were previously lobulated swellings above the clavicles, also pads of fat over the posterior parts of the scapula; these had now disappeared. The skin was formerly very dry and flabby, but now the skin and subcutaneous tissue were firm. The circulation was poor, but the heart-sounds were normal, and the temperature was not subnormal. His movements six months ago were extremely deliberate; he would occupy a minute in getting from one end of the bed to the other; indeed, the movements might be likened to those of a small sloth bear. He made his wants known by inarticulate sounds, but he was not dirty in habits. The mother said that the intelligence had very much increased after the administration of thyroid, and he could now repeat his alphabet and spell small words. There was some lordosis still, but not so marked as before. Nystagmus was still present. On the whole, the result of treatment was very satisfactory.

If the administration of the thyroid extract was stopped he could see nothing to prevent relapse. The limit of tolerance of the present patient was a dose of  $1\frac{1}{4}$  grains twice a day. If that were exceeded the boy became faint and tremulous. (*Exhibited February the 15th, 1901.*)

### Discussion.

**Dr. Shuttleworth** said Dr. Guthrie was to be congratulated on the result of the thyroid treatment in the case. He (Dr. Shuttleworth) had seen many of these children in the asylums and in the special schools of the London School Board, and frequently encountered cases where the parents did not take the trouble to continue the treatment, and in every such case a relapse occurred. Sometimes cases would be brought back quite as bad as ever they were, because treatment had been discontinued.

**Dr. John McCaw** (Belfast) said the case shown by Dr. Guthrie was most interesting. He (Dr. McCaw) had also seen many cases, and agreed that a relapse occurred when the treatment was discontinued. In the Children's Hospital at Belfast, last year, a case of myxœdema was treated by thyroid, and during such treatment serious symptoms supervened. The dosage had been gradually worked up to ten grains a day, and suddenly one evening symptoms of collapse set in. He thought the possibilities of such occurring during treatment should be borne in mind, otherwise the practitioner might be at a loss to understand the case.

**Dr. Dan McKenzie** (Leytonstone) said he had had some experience of endemic goitre, and in connection with the disease he saw one or two cases of cretinism which were undoubtedly connected with that mysterious disease. These cases did fairly well under thyroid treatment, but not so well as cases of sporadic cretinism. With regard to the quoted remark of Dr. Cheadle, he (Dr. McKenzie) was not aware that any case had been recorded in which such a child had been brought up to full adult life, possessing all the functions of the normal individual. Until such a case was brought they had no right to say that cretinism could be cured without continuing the extract. The difficulty was to get such cases early enough. When the symptoms aroused the alarm of the mother the child's condition had probably existed three or four years, and probably the case was seen too late for the treatment to get well grounded at the best stage of life.

**Dr. Fletcher Beach** said he had had a fairly large experience of such cases, and one important point was that the older the child, the less good was to be derived from the thyroid treat-

ment. He had now two persons under his care, one aged eighteen and the other sixteen, in neither of whom could he find any good from the treatment. Five grains daily had been taken, and it produced no bad symptoms. Undoubtedly they had to guard against large doses, as they caused tachycardia. The present child seemed to be at the age when the best results were produced. He thought it impossible that the condition could be cured so that the thyroid could be discontinued with impunity. He maintained that, for the child to be cured, it was necessary to take the thyroid for the rest of its natural life. He remembered the case of a girl under that treatment who, on account of measles breaking out in the hospital, was obliged to leave for a time, and when she came back the treatment had been neglected and she had reverted to her primary condition.

**Dr. Leonard Guthrie**, in reply, said he agreed that care should be taken not to press the thyroid; giving ten grains a day to a child was far more than ought to be attempted.

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### 31. A CASE OF NYSTAGMUS AND HEAD-NODDING IN AN INFANT AGED NINE MONTHS.

BY DAN MCKENZIE, M.D.

THE female infant, whose age is nine months, is large, plump, flabby, and rickety in a minor degree. She is too intelligent for her age. She has been reared on condensed milk. Jerking of the head was first observed at Christmas, 1900, and passed off in about a fortnight. It was followed by nystagmus of a rotatory character. Occasional oscillation of the head was seen after the onset of the nystagmus. She also had occasional twitching of the left corner of the mouth, the spasm sometimes extending to the shoulder muscles on the same side. Temporary lapses of consciousness have been noticed. The child fixes with only one eye at a time, the eye in use oscillating in the attempt to fix. Ordinary vision seems normal and colour vision is present. The child prefers looking at objects over her head. She has been treated by drop doses of Liquor Arsenicalis thrice daily.

*(Exhibited February the 15th, 1901.)*

### Discussion.

**Dr. Cautley** said cases of the kind just shown were not very uncommon, but true head-nodding was seldom seen. Although the cases were called eclampsia nutans he did not remember a single case having purely nodding movements; they were usually of a lateral type. The prognosis was excellent, as he believed all the cases recovered, and apparently without leaving any nerve affection behind. He had not heard of a case being followed by epilepsy. A curious association with the movements of the head was those of the eyeball, as if there was some close connection between the oculo-motor nuclei and the nuclei of the spinal accessory nerve. He had not heard an explanation put forth which seemed feasible, but it occurred to him the cause might be some delayed or impaired or unequal development of the nerve centres. Those children were unusually precocious, and the movements of the eyes and head were those which came on very early in life. Another suggestion was that the condition was due to severe exertion; that in consequence of the movements of that part of the body being earlier developed, they got very fatigued.

**Mr. Sydney Stephenson** said he agreed that the condition of head-jerking with nystagmus was not uncommon. A few years ago he had no difficulty in collecting twelve such cases in as many weeks at the North-Eastern Hospital for Children, and he had been occasionally puzzled by some cases which came to him with the nystagmus before the head-jerking came on. He agreed that pure nodding was rare. Occasionally one could obtain a history of nodding movements at one period, followed by lateral movements at another. Occasionally when under observation a child would nod and rotate or roll the head about. Sometimes there was no nystagmus, that symptom being replaced by a periodic squint. That he had noticed on three occasions; a child was brought to him with periodic squint and movements of the head, and later on nystagmus developed, which seemed to render the causation fairly clear. Another point was a curious retraction of the upper lids, exposing more eyeball than usual, and sometimes varying in degree whilst the child was under observation. Most of the cases he had seen were in children of Hebrew parents, who were notoriously subject to neuroses. Two days ago he saw a child of two years who had an ulcer of one cornea. The eyes rolled about from side to side. He asked the mother how long the eyes had been rolling, and received the reply, "Ever since it was three months old." "But," added the mother, "I do not attach much importance to it." On being asked why, she said she had had six other children, and they all began to roll their eyes and heads

at about three months, but they had all got well. He thought that indicated a family tendency.

**Dr. Dan McKenzie** (Leytonstone), in reply, said the unequal development theory did not explain the transient faints and unconsciousness. He thought there was some functional derangement of the nervous system involving the higher centres, not simply the centres of co-ordination. Squint was mentioned in connection with some of the cases reported, and some writers had also called attention to the family tendency. Perhaps it was fortunate that they tended to get well spontaneously, because there was not much prospect of treatment improving them.

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32. A CASE OF MENINGITIS DUE TO ACUTE SUPPURATIVE OTITIS; PUNCTURE OF DRUMS; RECOVERY.

By LAMBERT LACK, M.D.

THE patient, an infant aged fifteen months, was first seen on January the 2nd, 1901. For three weeks he had been crying a good deal and putting his hands up to his ears. The head was noticed to be retracted. Latterly he had occasionally been sick, was wasting rapidly, screamed out often, and the head was more retracted.

On January the 2nd the child was very wasted, the skin being loose and inelastic; the head was markedly retracted, and there was great rigidity of the neck. No rigidity of the limbs, pupils equal, no squint, knee-reflexes active, ankle-clonus present. There was occasional sickness. The child did not cry much unless disturbed.

The left drum was bulging, and on puncture much pus was evacuated. Three days later the child was distinctly better, no sickness, and the retraction of the head and rigidity of the neck much less. The right ear was punctured and pus let out. The left ear was still discharging. Four days later (seven since operation) the discharge from the ears had ceased, the perforation in the drums had healed, and the membranes were not bulging. The symptoms of meningitis had passed off.

Ankle-clonus could not be obtained. On January 14th the child was still greatly wasted, but otherwise well enough to return home.

The case is an interesting example of a child suffering from the usual symptoms of acute basic meningitis associated with, and presumably due to, suppuration in the ears, and cured by simply puncturing the drums. It is doubtful if actual meningitis is present in these cases, or whether suppurative otitis in infants may simulate meningitis. In any case the fact remains, that cases presenting all the cardinal symptoms of meningitis may be cured by treating the ears; and it follows that in every case of meningitis the ears should be carefully examined, and promptly treated if found affected. There can be little doubt that in such a case as the above meningitis would have followed if the ear affection had not been treated.

*(Exhibited February the 15th, 1901.)*

### Discussion.

**Dr. Theodore Fisher** (Bristol) remarked that Dr. Lack said it was difficult to prove in such cases whether meningitis was present. He regretted to say he had been able to prove the absence of meningitis in such a case. He sent a case into a children's hospital last summer, with retraction of the head and other symptoms associated with summer diarrhoea. That ended fatally. The idea of trouble having arisen in the ears had not occurred to him or the others under whose care the child was. Post mortem nothing was found in the meninges to account for death, but there was pus in both middle ears, and probably the cause of death was septicæmia.

**Dr. Cautley** asked what particular organism was found in the ear. Was the diplococcus of pneumonia present? That did sometimes give rise to basal meningitis, from which, however, the patient frequently recovered.

**Dr. Lister** said he had made numerous post-mortem examinations where a pneumococcal infection of the middle ear had been found, there being no meningitis present.

**Mr. Jackson Clarke** said that a long time ago, when he was at St. Mary's Hospital, he examined twenty or thirty cases and found pus containing tubercle bacilli.

**Dr. Lambert Lack**, in reply, said that he regretted that no examination of the pus had been made, therefore he could not

say what organism was present. As a matter of fact he punctured the ears of nearly all the cases of meningitis that he saw. He was not always prepared to make cultures.

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33. BILATERAL PROTRUSION OF EYEBALLS IN A  
GIRL AGED TWELVE YEARS; (?) CAUSE.

By GEORGE CARPENTER, M.D.

THE case was that of a girl, aged 12 years, who had suffered from proptosis for six months. Graefe's sign was occasionally present. The heart was natural. Her neck was short; the face of adult type; the head large and square, 23 inches in circumference, slightly bossed and suggestive of antecedent Parrot's nodes. The incisor teeth were slightly ridged, and suggested that she had been given a mercurial course during infancy. She complained of giddiness when her head was thrown back. The ears and hearing were natural. She had exaggerated plantar and patellar reflexes, and slight ankle and knee clonus but no rigidities. Her gait was deliberate though weak, for she stumbled at times. She could jump from a couch with deliberation. The fundus oculi presented the condition known as "pseudo-neuritis," and was otherwise quite healthy. On her trunk, back and front, were several patches of pigmentation; the nipples and linea alba were natural. She had not been taking arsenic. The case was brought for an expression of opinion by members of the Society as to the special significance, if any, of the proptosis in the absence of other well-known associated conditions, and as to what meaning could be attached to the nervous phenomena detected in the lower extremities. (*Exhibited February the 15th, 1901.*)

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## 34. A CASE OF MACROSTOMA WITH CONGENITAL CLUB-HAND.

By JACKSON CLARKE, M.B.

THE case was that of a child aged nine months. At birth there was a marked condition of macrostoma and severe club-hand, both on the right side. He had operated on the macrostoma when the patient was five weeks old. Before the operation the baby was very thin owing to its inability to suck. Since the operation it had become fat. The deformed hand was sharply bent to the radial side, and the radius was absent. At present the treatment was limited to passive manipulations and the use of the malleable splint. When, and if the child reached the age of five or six years he contemplated operating by section of ligaments, elongation of tendons, and splitting the lower end of the ulna.

*(Exhibited February the 15th, 1901.)*

#### Discussion.

**The Chairman (Mr. Watson Cheyne)** said Mr. Jackson Clarke was to be congratulated on the result of the operation.

**Dr. Sutherland** asked whether Mr. Jackson Clarke could give any reason for the association. Had the child's hand been pressed into its mouth during uterine life?

**Mr. Jackson Clarke**, in reply, said his own idea was that the hand had been pressed into the mouth *in utero*.

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35. A CASE OF ACUTE RETRO-BULBAR NEURITIS  
IN A GIRL AGED TEN YEARS.

By ARNOLD LAWSON, M.D.

THE history dates back to May, 1900, when the child suddenly complained of loss of sight in the right eye.

She is positive that her sight was unaffected the night before. The left eye was a shrunken stump lost in infancy. The sight failed very rapidly, and when first seen, two days after the onset of symptoms, she was practically blind. Ophthalmoscopically the arteries were normal, the veins slightly turgid, and the disc margin slightly blurred. The pupil was semi-dilated and almost immobile, and the vision reduced to bare light perception with bad projection. The family history was bad, the father and four brothers and sisters having died of phthisis, tubercle being also in the family on the mother's side. The child herself had been on her back for two years with Pott's disease. She was ordered mercurial inunction, diaphoretic treatment by hot baths, and spectrum-blue glasses for constant wear. She slowly improved, but not to any marked degree, under this treatment. After three weeks the stump of the left eye was excised on the supposition that it might be furnishing a cause of irritation, though there was no external evidence that such was the case. Nothing could be found in the excised stump, microscopically or macroscopically, to furnish any clue, but the excision of the stump was followed two days later by sudden marked improvement, which has been maintained. The progress seemed to stop again after a week, but recent examination shows that slight steady improvement has been going on. Her present vision is about  $\frac{0.5}{6.0}$ . The peripheral field is quite normal. The colour sense has returned with reference to blue and large saturated red objects; green sense is lost.

(*Exhibited February the 15th, 1901.*)

### Discussion.

**Dr. John McCaw** (Belfast) thought the Society should feel indebted to Mr. Lawson for bringing the case forward. It seemed to be the kind of case which used to be diagnosed as cerebellar tumour in a child with optic neuritis. He supposed the diagnosis of retro-bulbar neuritis was correct, but what was the upshot of the case if it was tubercular? In a child of ten years they must always remember the hysterical element.

**Mr. Lawson**, in reply, said if Dr. McCaw had seen the case he did not think he would have had any doubt about the condition of the nerve, which looked quite chalk-like. There was tremendous atrophy of the optic nerve and other signs of blindness, such as a dilated pupil and immobility to light, and the fact that the child would run against an obstacle and hurt itself. There was no evidence of the optic neuritis seen in connection with cerebral tumour. The ophthalmoscopic signs were practically *nil*.

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### 36. A CASE OF TETANUS NEONATORUM SUCCESS- FULLY TREATED WITH ANTI-TETANUS SERUM.

By JOHN McCAW, M.D.

THE greater care bestowed upon the infant at birth, together with the more general use of antiseptics in the dressing of the cord and navel, have made the appearance of this affection one of considerable rarity ; but amongst the poor of our cities large numbers of women are attended by "a neighbour" or other person to whom antiseptics are unknown, so that it is not surprising if a case does occasionally occur ; indeed, looking at the surroundings of many lying-in chambers, the wonder must be that more cases are not seen. As this infant was admitted into hospital under my care, I had the advantage of watching it very closely, and following the progress of the case from day to day ; but in addition to this I had the satisfaction of having the diagnosis confirmed by bacteriological examination by my friend and colleague, Dr. Lorrain Smith, whose report is appended.

E. H—, aged 13 days, was presented for treatment at the out-patient department of the Belfast Hospital for Sick Children, Queen Street, on the morning of November the 26th, 1900. She was seen by the assistant physician in

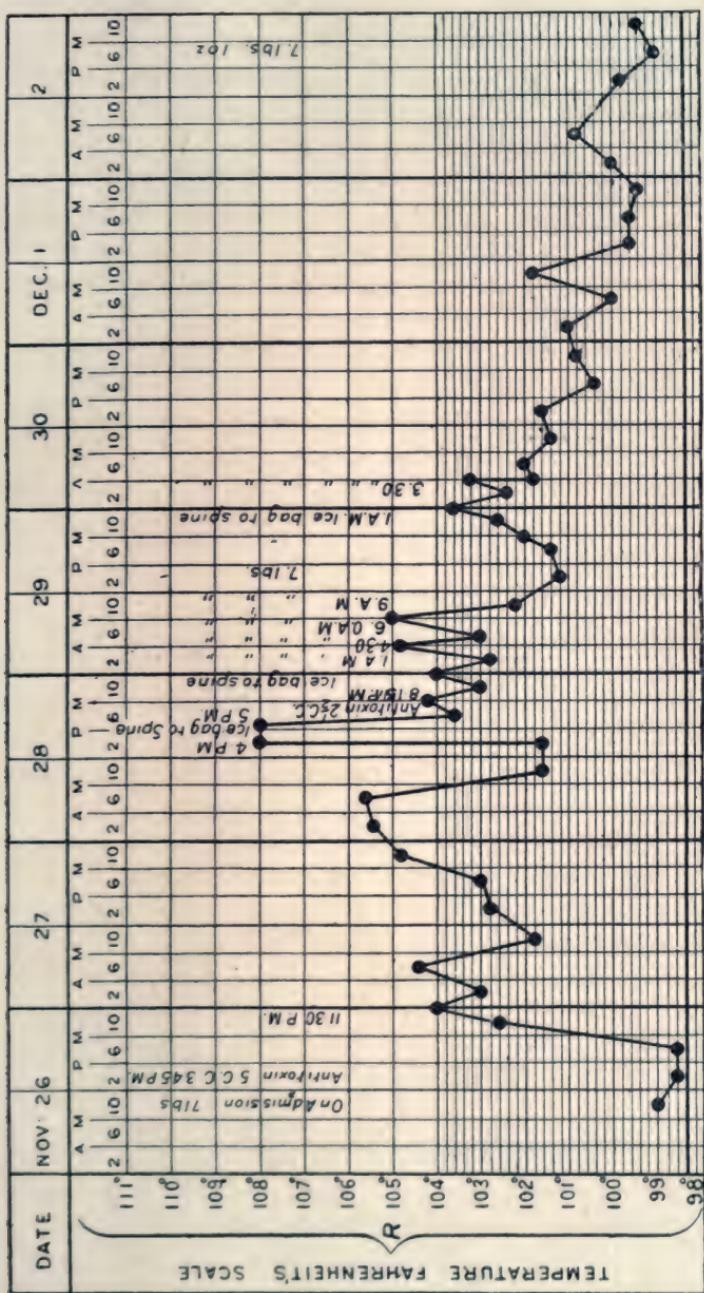
attendance, Dr. Leathem, who promptly recognised the nature of the case, and admitted her to the Medical Ward.

*History.*—The labour was tedious, but not instrumental ; the confinement was conducted by “a neighbour,” and the cord divided with the ordinary scissors of the house, and dressed with a piece of old linen, but whether this was charred or not before application the mother does not know. All went well with the child until the ninth day, when the mother observed that it could not suckle, or rather that it was unable to fasten on the nipple ; she also thought that its shoulders were “gathered up,” and further, that it was inclined to keep its head back.

*On examination.*—The child was well developed, and weighed 7 lbs. The skin and mucous membranes were healthy. The temperature was 99° F. in the rectum, the pulse 130 to the minute, and the respirations normal, except during the attacks of spasm. The child was stripped, and examination revealed the following condition :—The whole body seemed to be in a state of tonic spasm, and, passing from above downwards, the forehead and eyebrows were marked by transverse lines ; the eyelids were tightly closed, the lips were pursed up, and deep furrows ran from the alæ of the nose to the angles of the mouth. During the periods of definite exacerbations all these signs were accentuated, producing well-marked *risus sardonicus*. The jaw was rigidly closed, so that even a spatula could not be introduced ; the sterno-mastoids stood out boldly, and the muscles of the back of the neck, the spinal muscles, and those of the abdomen were all firmly contracted. The arms were tightly drawn down to the sides, the forearms were pronated, and the thumbs and fingers were rigidly flexed into the palms. The thighs and legs were flexed at right angles, the feet were strongly arched and in a position of equino-varus. There was well-marked retraction of the head, and, during the attacks of spasm, this retraction, added to the overaction of the spinal muscles, produced a condition of opisthotonus. The con-

dition of extreme muscular irritability was very noticeable, so that the least touch or movement of the child was sufficient to develop at once a paroxysm of general spasm ; this was well exemplified when the teat of the sucking-bottle was put to its lips, or when the child was lifted, or its position changed. The duration of the spasms varied, but generally, I should say, they lasted about half a minute. During their occurrence the baby became deeply cyanosed and cried with a suppressed whine. The respirations were apparently but little interfered with except during the actual attacks of spasm, and auscultation revealed nothing abnormal. The abdominal muscles were so rigid as to preclude any satisfactory observations being made concerning the action of the diaphragm. The heart-sounds were normal, and the pulsations, which were easily counted through a widely open anterior fontanelle, ranged from 160 to 170 to the minute, the rate slowing down during the spasms. The umbilicus was in a very filthy condition and covered with foul-smelling pus and slough. The parts round it were swollen and of a deep red colour for about half an inch. The mother was not at all clear about the cord, but she thought it separated on the fifth day, and it had not been dressed from that time till the child was brought to the hospital. Dr. Leathem took a swab from the wound at the time and sent it to Dr. Lorrain Smith for examination.

*Treatment and progress.*—As this seemed a suitable case for a trial of antitetanus serum I decided to use it and it alone, and accordingly I injected on November the 26th 5 c.c. of tetanus antitoxin from the Pasteur Institute. This was done under the skin of the left abdominal wall with all due antiseptic precautions. At this time the baby was quite unable to use the feeding-bottle, and it was nourished by a suitable preparation of cow's milk, which was introduced at the side of the mouth and allowed to trickle into the pharynx, the head being held well back. The umbilicus was cleansed with boracic



lotion and a boracic fomentation applied every two hours. I saw the baby again at 9 p.m., and its condition was not changed, except that its temperature had risen to 102.6° F., and the bowels had acted in response to a teaspoonful of castor oil. At 11 p.m. the temperature reached 104° F., at 1 a.m. it was 103° F., and at 5 a.m. 104° F. again. I visited it again at 10 a.m., and the report was favourable; the attacks of spasm were very severe each time it was fed or moved, but otherwise it seemed comfortable, and slept at intervals.

November the 27th, 10 a.m.—This morning the spasm of the masseters was much less pronounced, and the infant could feed from the bottle; bowels acted; perspiring freely; passed urine; temperature 101.8° F. At 8 p.m. it seemed better; still perspiring freely; the ward sister had not noticed the spasms so frequently, but they were still severe when it was lifted or fed. At 10 p.m. the temperature had risen to 104.8° F.

28th.—At 6 a.m. the temperature was 105.6° F.; bowels acted; child seemed comfortable. At 10 a.m. the temperature had again fallen to 101.6° F. The report this morning was that the child was better; it was taking its bottle quite naturally, and the spasms occurred only when the child was lifted, etc. At 4 p.m. the baby was not so well; breathing quickly; temperature had risen steadily from 2 p.m., until now it was 108° F. I ordered an ice-bag to be applied to the spine in the upper dorsal region for one hour. This had the desired effect, and the temperature fell to 103.6° F. in an hour. At 8 p.m. I saw the child again; the temperature was moving up again, and was at this time 104.4° F. I injected a further dose of antitoxin, this time giving 2½ c.c. under the skin of the right abdominal wall. The spinal ice-bag was again applied for one hour. Through the night the ice-bag was reapplied at 1, 4.30, and 6.30 a.m., and the temperature prevented from rising above 104° F. Except for this high range of temperature the child appeared better, but still had severe and repeated spasms when

being fed or changed, or moved in any way ; from time to time it would burst out into a cry when lying quietly, and have an attack of spasm.

29th.—At 10 this morning the child was better, taking its bottle and apparently quite comfortable. The facial spasm was not so noticeable, but the *risus sardonicus* could be easily called forth by putting the finger to the lips ; it was weighed to-day, and found to be just the same as on admission ; the temperature was 102·2° F. ; bowels acting naturally. At 8 p.m. the improvement had been maintained ; temperature 102° F., and there was nothing of an untoward nature to record ; the spasms were still very severe at intervals, but these intervals were longer. During the night the temperature rose to 103·6° F., and the ice-bag was again applied ; this was the last occasion on which it was used to reduce temperature.

30th, 10 a.m.—This morning the baby was looking better ; it was now taking notice of things, and there was a perceptible diminution in the rigidity of the neck, arms, and legs ; its temperature was 101·4° F. It was feeding now quite easily, and the kidneys and bowels were acting naturally.

From this point until the child was discharged cured on December 29th the progress of the case was entirely satisfactory. It gained steadily in weight, being 7 lbs. 1 oz. on December the 2nd, 7 lbs. 13 oz. on the 9th, 7 lbs. 15½ oz. on the 14th, 8 lbs. 9 oz. on the 18th, and 8 lbs. 9½ oz. on the 29th, the day it was discharged, and in all respects it was a fine healthy baby.

*Pathological Report by Dr. Lorrain Smith.*

“ The swab on sterilised cotton wool was transferred to a tube of broth, and incubated at 37° C. anaërobically. On examination after some time the broth showed a plentiful growth of bacilli having the characters of the tetanus bacillus (flagellæ, end spores, etc.). There were also some streptococci. The broth was inoculated into a

mouse after two months' growth, and caused the death of the mouse in less than twenty-four hours. The dose was about  $\frac{1}{2}$  c.c."

The results of the treatment of tetanus neonatorum with antitetanus serum up to the present are far from encouraging. Professor Escherich has treated four cases with one recovery, but whether the serum was the sole remedy used is not stated.

Dr. Firth reports in the 'British Medical Journal' for January the 9th, 1895, a case treated in the Bristol General Hospital, but unfortunately without success; in that case the first symptoms were noticed on the eighth day of life, and four days after it was admitted to hospital; it was treated with chloral and bromide till the eighth day of the disease and the fifteenth of life, and on the evening of the latter day it got its first injection of antitoxin. I think the lesson to be drawn is clearly that if the antitoxin is to be successful it must be used early, and I think another important point is that a large initial dose is better than a repetition of small ones. In regard to the very high point to which, in my case, the temperature rose on the third day after treatment was begun, it is not often one sees a temperature of  $108^{\circ}$  F., which, of course, is incompatible with a continuance of life for any length of time. Fortunately it was very promptly controlled by means of the ice-bag, and care was taken not to allow it to reach anything like such a height again. I have great confidence in the ice-bag for controlling pyrexia in children, and in this case it acted promptly, and never failed in bringing about the desired effect. The intra-cerebral method of injecting the serum has been used in many cases in adults, on the ground that the remedy is more quickly and more effectually brought into contact with the nervous system. Full accounts of cases are given by Dr. Semple\* and Dr. Gibb.† The opera-

\* 'Brit. Med. Journ.', January 7th, 1899, p. 10.

† *Ibid.*, April 15th, 1899, p. 895.

tion could have been easily performed through the open fontanelle of the infant.

(Read February the 15th, 1901.)

### Discussion.

**The Chairman (Mr. Watson Cheyne)** said they were all indebted to Dr. McCaw for coming so far to read that interesting paper. The chief point was how far the serum had anything to do with the recovery of the child. He considered it a case of chronic rather than acute tetanus; that class of case in which recovery sometimes occurred apart from serum. The serum did not appear to have produced any rapid effect in the way of bringing about a reduction of temperature.

**Dr. McCaw** (Belfast), replying, said the first symptoms noticed by the mother occurred on the ninth day; the serum was given on the 13th. He did not say the case would not have recovered if it had been left alone, but the point was what they would have done in the case of their own child. He thought they would all be willing to apply the latest and best scientific methods. He considered the action of the serum in the present case had a distinct connection with the cure. The child was very ill on the thirteenth day of life, practically absolutely starved. So great was the spasm that a spatula could not be introduced between the gums. Moreover, seeing the mortality of the disease was about 99 per cent., they had a right to regard the serum as the means of saving the life. He had a difficulty in regard to the best dose to give. He understood that an adult dose was 10 c.c., and therefore he thought 5 c.c. would be about right. He gave that quantity, and twenty-four hours afterwards the temperature went up to 108.2° F., and was verified. He could not say whether that was cause and effect. Was that rise in temperature the effect of the battle between the microbes and the serum? That question he left to the meeting. Another striking point was that the temperature was easily kept under control by means of the ice-bag. He believed that the ice-bag was not sufficiently used in connection with children's diseases. He had seen great benefits follow its use in all grave inflammations, such as pericarditis, pneumonia, and peritonitis.

37. TWO SISTERS SHOWING MALFORMATIONS OF THE SKULL AND OTHER CONGENITAL ABNORMALITIES.

By GEORGE CARPENTER, M.D.

THE subjects of this communication are two sisters—Dorothy, aged 1 year 11 months, and Florence, aged 3 years 10 months. The mother of the children is a fine, healthy-looking woman. With the elder child she was in labour some thirty-six hours, and was delivered by instruments, the presentation being natural. The head at birth is stated to have been the same as at present, and it was "much marked" by the forceps. With the younger labour lasted for eleven days, and was without instruments. It was a head presentation. There was no history of rheumatism or syphilis. A maternal uncle's child had deformed fingers. The most striking abnormalities about these children are the peculiar conformation of their skulls and their facial expressions.

To begin with the younger, Dorothy. Here are photographs illustrating the appearances of the head and face. The skull measurements are as follows:—Circumference 18 inches; from the root of the nose to the back of the occiput 14 inches; from one ear-root transversely to the other 10 inches; from the external angular process of the orbit to the root of the ear on the left side  $2\frac{1}{2}$  inches, and on the right  $2\frac{5}{8}$  inches.

The lambdoidal suture is natural in situation, and easily traced in part of its course. The posterior fontanelle is patent, as also the postero-lateral fontanelles. Passing now to what I will call the coronal suture for purposes of description, this will be found on the left side to stretch obliquely upwards from a point one finger's breadth in front of the root of the ear to join the sagittal suture, on a level with the top of the ear. On the left side this suture can be felt the whole of its

course. On the right side it is somewhat nearer the root of the ear at its commencement. For one third of its distance its direction is upwards and backwards; it then runs upwards and forwards, making an obtuse-angled bend, and ends abruptly about 2 inches from the vertex. One finger's breadth to the back of this, and commencing on a level with its termination, a suture, part of the coronal,

FIG. 10.



passes vertically upwards to the extent of one inch or more and terminates in a suture bordering a beak-like prominence of bone to be mentioned presently. Connecting the postero-lateral fontanelles and the commencement of the coronal suture on either side the curved squamous suture can be felt, though not readily.

The sagittal suture passes forwards for some distance in the usual direction until within a finger's breadth of the

coronal suture. Here a distinct beak-like bony prominence is encountered, which runs forwards for about 3 inches. This beak is an inch broad at its widest part, and  $\frac{1}{2}$  an inch at its narrowest. The sagittal suture bifurcates at the commencement of this bony prominence, and on either side of it sutures can be detected. On the left side the unbroken line of the coronal suture terminates; on the right, the upper member, 1 inch long, of the broken coronal suture previously mentioned. Behind the level of the coronal suture there is  $\frac{3}{4}$  of an inch of the beak-like prominence of bone, and in front the beak merges into the base of a pear-shaped frontal protuberance of the skull, and is there lost.

On the right side, passing from the outer margin of the orbit, a somewhat sinuous suture extends vertically upwards for 3 inches or more. It terminates  $\frac{3}{4}$  of an inch from the right hand fork of the sagittal suture, bounding the prominent ridge of bone, and 1 inch or more from the termination of the middle limb of the coronal suture. From the supra-orbital notch, which is very large, a suture starts vertically upwards to the extent of about  $\frac{3}{4}$  of an inch.

On the left side there is a corresponding sinuous suture passing upwards about  $1\frac{1}{2}$  inches from the supra-orbital notch, which is also very large. From the external angular process a ridge of bone stretches vertically upwards for about  $1\frac{1}{2}$  inches, which may possibly be a suture.

The skull in front of the so-called coronal suture, which, it will be noticed, is out of position, presents the following characteristics :

From the root of the nose the skull rises sharply upwards, and when looked at from the side its top is on a level with the tip of the nose—it overhangs.

Viewed from the front it is pear-shaped, with the stalk of the pear at the root of the nose, and its base is met by the beak of bone previously described.

On the right side, the skull, from the coronal suture to that which I will term "frontal," is markedly convex and bulged. This bulging starts from the commencement of

the zygoma, and ends about two fingers' breadth from the forked sagittal suture on the right of the median beak of bone. The skull there is comparatively flat. No antero-lateral fontanelle can be felt, and the sutures in this area cannot be distinguished. On the left side the same remarks apply, but the skull is here not quite so prominent.

FIG. 11.



The facial expression is peculiar. The upper lids are thrust down, as also the eyes. The root of the nose is flat. The nose, lips, and tongue are blue, and the extremities cold and cyanotic.

*Heart.*—The cardiac impulse is just outside the nipple, and an epigastric impulse can be felt. There is no ex-

tension of cardiac dulness to the right. A loud systolic bruit is heard over the second left interspace, and better over the left side of the chest than the right. It is audible in the great vessels of the neck, but is not conducted to the back. There is no thrill.

The hands and feet are deformed.

*Hands.*—The little fingers, first fingers, and thumbs are partially webbed, and the ring and middle fingers completely so. The fingers can be hyper-extended.

*Feet.*—There are six toes on each foot, and all are webbed excepting the little toe and that next to it, where the webbing is partial. Only one bone can be seen in each of the little toes, in the three next two bones, and on the two following toes one bone each.

*Ruptures.*—In the abdominal wall, in the mid-line, there are two holes; one about the level of the umbilicus is rounded, and will admit the tips of three fingers. Three quarters of an inch above this there is another hole, which will admit the index finger.

The eyes externally appear to be natural. The veins in the fundus are very corkscrew-like, large, and full of dark blood. The arteries are tortuous and perhaps a trifle small.

Passing now to Florence, the child's forehead is somewhat like that of her sister, but it does not overhang the tip of the nose. The skull is keel-shaped, the keel commencing at the top of the forehead, and terminating on a level with the parietal eminences. The back of the head is natural. The circumference of the skull is 19 inches; from the external angular process to the root of the ear on either side it measures  $2\frac{5}{8}$  inches; from the nape of the neck to the root of the nose 15 inches; from one ear root to the other 12 inches transversely, across the forehead  $9\frac{5}{8}$  inches, and over the occiput  $9\frac{3}{8}$  inches. The eyes are prominent and small, with heavy upper lids. The lower lids are somewhat puffy-looking. The nose is short, forming almost a right angle, and the bridge is flattened. The upper lip is long, and both lips are thick and

pouting. The chin is very short and receding. The face is fat and broad, with very little expression, its general appearance being that of an older person.

When the child is cold its nose becomes blue, and the

FIG. 12.



face dusky-looking, but otherwise the circulation is not abnormal. She is well nourished.

*Heart.*—There is a systolic murmur, best heard over the left base, which is not conducted far. The heart does not appear to be enlarged.

*Hands.*—The hands show the same deformity as the sister. The webs between the ring and middle fingers have been partially operated upon.

FIG. 13.



*Feet.*—There are six toes on each foot as with the sister. The big toes and the next are partially webbed, and there

is incomplete webbing between the little toes and the next. The webbing is complete in the others.

An X-ray examination shows that all the toes have two joints excepting the big toe, which has but one. The metatarsal bones of four of the toes starting from the little toes are natural. The fifth appeared to be thickened, and the sixth were wedge-shaped, with their apice pointing forwards.

*Rupture.*—There is an umbilical hernia the size of a Tangerine orange.

*Eyes.*—There is a small congenital opacity in the cornea of the left eye, down and out. Both optic discs appear to me to be on the pale side, and the veins are very tortuous.

#### *Remarks.*

Misfortunes rarely come singly, and so it is with congenital malformations, and these cases, with their multiple deformities, illustrate this point. What I have called the coronal suture, for purposes of description, is apparently not the coronal, but a supernumerary suture, which divides the parietal bones into two parts. The true coronal suture, which I have designated the frontal, is not so well marked as are the other sutures.

It would appear, then, that the parietal bones are each made up of two parts, one of which may be looked upon as a large Wormian bone and further, that the prominent central beak of bone is a third Wormian, bone. The frontal bone, in addition to being deformed in other respects, is also broken up by irregular sutures.

It is impossible to give an opinion as to the nature of the heart lesions. These are probably of a developmental character, and not due to foetal endocarditis. With regard to the basic bruit heard in the elder child, I am inclined to the view that there is possibly a malformation there also; in the first place because of the cyanosis which occurs temporarily, and in the second because of the condi-

tion of the fundus oculi. I think the latter decidedly suspicious, though the size of the heart lends no support to such a theory. (*Exhibited March the 15th, 1901.*)

### Discussion.

**Mr. Sydney Stephenson** asked whether, in the elder girl, Dr. Carpenter accounted for the unusual condition of the eyes by some developmental fault in the roof of the orbit. Probably the roof of the orbit did not occupy its proper angle, and so pushed the eyes downwards. In the elder child he noticed that the cornea was imperfectly developed; at one portion its outlines were not elliptical, and the neighbouring sclerotic seemed to run into the cornea.

**Dr. Sutherland** asked whether there were any maternal impressions in the case.

**Mr. Clement Lucas** thought the chief interest in the cases lay in the curious similarity of the shape of their heads, which no abnormal labour would account for. As there were defects in other parts also, it must be assumed that there was primary defect in development. The cases showed the interesting fact that when there was deformity, other defects were also found which seemed to bear no relation to each other. In these cases there were not only deformed heads, but also webbed fingers, and supernumerary toes on each foot; there was, in addition, congenital heart disease, and a defect in the eye. He took it to be true that such a condition once produced was sure to be hereditary if these children had children. He once traced hereditary defect in five generations in the toes, and the same condition was present in 30 per cent. of all the cases, all descending from a certain individual. In that case also there was harelip and cleft palate, and the same deformity was passed on to the next generation.

**Dr. George Carpenter**, in reply, said there were no maternal impressions. He thought the displacement of the eyes was owing to developmental abnormalities in the orbits. With regard to the other observations, he had exhausted all he had to say in the notes he had read.

## 38. DYSPEPTIC ASTHMA AT THE AGE OF SEVEN MONTHS.

By WILLIAM EWART, M.D.

TRUE asthma, which all authorities agree in recognising as common in childhood, is exceedingly uncommon, or at any rate seldom recognised in infancy. Isolated instances have, however, been put on record by Henoch (two cases aged 8 months), Baginsky (a case aged 9 months), Moncorvo (a case aged 2 months), and Comby (a case aged 6 weeks). Of the genuineness of the present case there seems to be no question. All the symptoms of true asthma were present during the paroxysms, whilst during their intervals the child was quite comfortable. This disposes of the suspicion that the seizures were aggravations of an attack of bronchitis, or that the case was one of the bronchitic or catarrhal form of asthma, and identifies it as one of spasmodic asthma. The first paroxysm, having occurred prior to admission, could not be attributed to the irritation of the nose by the nasal method of feeding, which was not resorted to until the next day. Again, teething can hardly be charged with the causation, since the gums presented no signs of impending eruption. The dominant feature in the whole case was the gastric disturbance and the vomiting; this may therefore be regarded as an instance of the so-called "dyspeptic asthma." The treatment was directed accordingly to the gastric condition as well as to the respiratory spasm, being mainly dietetic in the one direction and chiefly medicinal in the other. In a case of this kind where food is persistently refused and repeatedly rejected, nasal feeding is indispensable, and to its employment the general improvement was mainly due; as regards

the paroxysms, it is difficult to apportion the credit to the various drugs administered. Apomorphine seems to have been of use. Iodide of potassium did not give rise to any complications, and to it a large proportion of the relief may fairly be attributed ; but the minute dose of hydrochlorate of cocaine may not have been without some definite influence. Lastly, heroin, which was prescribed at a later date, was thought to be of unmistakable service in easing the patient and in restraining the vomiting and the spasms. Some good effects were also manifestly due to the application of expiratory pressure to the thorax. *(Exhibited March the 15th, 1901.)*

*Sequel.*—The patient died a few days later after a series of paroxysms, but a necropsy not having been permitted the correctness of the diagnosis could not be verified.

### Discussion.

**The Chairman (Dr. Cautley)** agreed that such cases were decidedly uncommon, but thought that now attention had been drawn to it more would be brought forward. Some of the cases with such symptoms were difficult to diagnose from capillary bronchitis. He supposed that in the present instance Dr. Ewart would lay stress on the recurrence of the attacks and their short duration. It would be well to know whether there was any source of irritation besides the stomach condition, such as elongated uvula, enlarged tonsils, or adenoids ; and secondly, whether the asthma had produced any emphysema. What was the prognosis in the case ? Was the child likely to be subject to asthma in after life ? Again, was there anything in the family history which predisposed to the condition ?

**Dr. Chapman** asked whether Dr. Ewart tried an emetic, and what food the child had before it was attacked ; *i. e.* did it feed at the breast, or if not what was the character of the artificial food ? Also, was there any bronchial state before the attack ?

**Dr. Chaffey** (Brighton) asked whether Dr. Ewart had ever made a post-mortem on a similar case. A few days ago he (Dr. Chaffey) made an autopsy on an infant who had been ill only two or three days. There was no marked bronchial

condition, but a very large thymus was discovered. The age of the child was three months.

**Mr. Tubby** asked whether any examination of the larynx had been made. The child seemed to suffer from what were known at the Evelina Hospital as "black fits," and it would be interesting to know whether all sources of peripheral irritation had been excluded before the case was regarded as one of ordinary asthma.

**Dr. Sutherland** said he had seen several cases of the same age with attacks of apparent asthma, but in all the cases he thought he made out that the thymus was the organ affected. There was dulness on percussion, very harsh breathing at the upper part of the sternum, carried out over the upper part of the right lung. Apparently the thymus pressed on the right bronchus. Some of the cases died, but not under his care, and he did not make the post-mortems. He had never seen the asthma persist after the age of two years.

**Dr. Ewart** said, in reply, that he had not examined for adenoids, chiefly because the child was so ill. But the nurse had no difficulty in passing the nasal catheter. He could scarcely say what the prognosis was. Obviously the child was of a delicate make, and if his diagnosis was correct, he thought there would be respiratory weakness in after life. The child was breast-fed at first, namely, from December the 24th to January 21st. After that it had three bottles of milk and barley-water a day, equal parts. Then came the stage of vomiting all food, and that was the stage at which the asthma had its incidence. He did not see the child the first day, but possibly an emetic might have been of great service in bringing down the diaphragm, though it did not occur to him to give it. He had never diagnosed simple asthma in so young an infant. It was conceivable that if the thymus was enlarged the child would be subject to spasmodic affections, spasm in the bronchioles as well as in the glottis. But against such a view in the present case was the fact that the child was so wonderfully comfortable in the intervals. The child's chest was barrel-shaped, and the breathing was interfered with; it was also emphysematous, therefore percussion did not reveal what might be present. He did not think there was any marked enlargement of the thymus.

## 39. SUBDURAL ABSCESS SECONDARY TO OTITIS MEDIA.

By CLINTON T. DENT, M.C.

F. D—, a lad aged 12 years, has suffered for two years with double otorrhoea, having occasional attacks of vomiting and headache.

On admission to St. George's Hospital he looked very ill. The breathing, however, was quiet, and the temperature normal. The pupils were equal; there was neither squint nor facial paralysis, and cerebration was not slow. His abdomen was retracted, and there was a very foul discharge from both ears, with slight tenderness over the left mastoid. He vomited constantly, and two days after admission he had a rigor and a temperature of 103.4° F.

He was trephined on the left side, and a small subdural abscess was found. The wound was enlarged and the lateral sinus exposed, being found covered with lymph and thrombosed. The whole of the outer wall of the sinus was cut away, and the clot removed. The internal jugular vein was not ligatured. The wound was plugged with cyanide gauze. He made a rapid recovery in every respect.

The point of interest in this case was that a subdural abscess was diagnosed before operation. The absence of the symptoms of slow cerebration and a normal temperature contra-indicated cerebral abscess.

Secondly, it is not necessary to ligature the internal jugular vein in the neck in cases where the lateral sinus is thrombosed. The cavity of the tympanum was freely opened. *(Exhibited March the 15th, 1901.)*

**Discussion.**

**Mr. Tubby** said he missed very much in the report a statement as to the condition of the optic discs. It was curious how

the optic discs underwent certain changes, even in a case of mastoid abscess apart from gross intra-cranial mischief. If observations on that point could be made and tabulated, they would be very useful as bearing on the optic disc changes in intra-cranial suppurative lesions.

**Mr. Jaffrey** (who showed the case for Mr. Dent), in reply, said the boy was very ill when brought in, and had a strong objection to light; therefore the optic discs were not examined.

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#### 40. A CASE OF SACRAL TUMOUR.

By FRANCIS JAFFREY.

THIS girl, aged 2 years (one of twins), is suffering from a sacral tumour. The tumour occupies nearly the whole of the sacrum and coccyx. When first seen it was much larger than it is at present, and was partly cystic and partly solid. It was tapped three times, and a quantity of dark-coloured fluid removed, which, on examination, was found not to be cerebro-spinal in origin. Owing to the size of the tumour and the health of the child it was decided not to operate at present. Meanwhile the skin, which was always very thin in parts, gave way and suppurated. Since then it has markedly diminished in size.

The question when she was first seen was, what was the nature of the tumour? It was finally settled that it was a teratoma. It is intimately connected with the posterior wall of the rectum.

*(Exhibited March the 15th, 1901.)*

#### Discussion.

**Mr. Clement Lucas** said he doubted whether the tumour had any connection with the spinal cord or canal. There seemed to be no distensile impulse in it when the child cried. If it had been under his care at first he would have straightway excised it, but

the time for that seemed now to have gone, as it was undergoing cure by suppuration. When the suppuration had subsided again he thought the remaining mass could be safely removed.

**Mr. Jaffrey**, in reply, said he agreed with Mr. Lucas. But when he saw the patient first the child was very small and the tumour very large, so he did not like to attempt it. The child was one of twins. The tumour seemed to be connected with the rectum. He intended to attack it later on.

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#### 41. A CASE OF ATHETOSIS AND LEFT HEMIPLEGIA.

By EDMUND CAUTLEY, M.D.

THE case was that of a boy aged 7 years, one of seven children, of whom one died from tetany, and another has congenital pulmonary stenosis. He had measles and varicella as a baby. At six months he had a fit, which was ascribed to a "fall from a pram." Since then he has had several fits, and at two and a half years hemiplegia developed after fits of eight hours' duration, and subsequent drowsiness for three days. The athetosis began shortly after the attack of hemiplegia. Since then he has been subject to fits occasionally. At three and a half years of age he was an in-patient for fits, and at that time it was noted that he was a backward and mischievous child, but clean in his habits. A year ago he had a severe attack of enteric fever. At present he is well nourished, is said to be bad-tempered, backward in school work, and has a peculiar fascination for running after trams, being subsequently found in workhouses or police stations. The athetoid movements of the left arm are characteristic, but not severe, and affect chiefly the hand. He walks badly on the left leg, and the knee-jerk on that side is a little increased.

The probable explanation of the condition is cortical haemorrhage, or thrombosis due to a fit, and some persistent local irritation of the nature of sclerosis. It is a question whether any operative treatment would prove beneficial, but on the whole the condition seems hardly sufficiently severe to warrant a measure of such doubtful utility.

*(Exhibited March the 15th, 1901.)*

### Discussion.

**Dr. Turnbull** asked whether the movements ceased during sleep.

**Dr. George Carpenter** asked whether there was any facial paralysis. He thought there was a good deal of purposive element about the movements. Had the boy been in hospital and been watched there? Also, had he been given any large doses of bromides?

**Mr. Tubby** asked whether there was any evidence that the movements were less when the boy was not being watched. From time to time he saw a large number of such cases, at all stages and of all ages. He thought the movements in the present case were much slower than in athetosis. With regard to cerebral operation, he thought no one would be so unwise as to attempt it, especially if haemorrhage was the cause, because the brain was then cystic and bound up in one mass. As to prognosis, one found they generally improved a good deal, especially if there were no deformities. If deformities were allowed to go on he thought the mind became dwarfed at the same time, but if the physical condition were restored improvement occurred both in mind and temper.

**Dr. Leonard Guthrie** asked whether there was any congenital specific mischief. Sir William Gowers' theory was that such cases were due to cortical thrombosis, but he was not aware of post-mortem proof of it. He agreed with Mr. Tubby that it would be useless to attempt operation, at least in the present case, for several reasons. But in a case of his own he did have the operation performed. It was a very bad case, and the movements of such great violence that the patient had to keep his arms behind his back. The motor area was exposed, and under chloroform they found they could produce the movements by stimulating it with galvanism. The part of the cortex was excised, and as a result the movements entirely ceased for more than a week. But at the end of that time they returned and became more intense than ever. The sequel was a little more satisfactory, because eventually the patient improved to a

certain extent, and was now able to make more use of his arm than before. He had no treatment.

**The Chairman (Dr. Cautley)**, in reply, said he regarded it as a case of athetosis. Had he not had fits, and hemiplegia on the same side, he would have looked upon it as habit; but there was also the history of acute illnesses. The patient dragged the leg somewhat in walking, and his knee-jerk was exaggerated on that side. The movements continued when the patient was not being watched. He had been in hospital on two occasions—for fits and for enteric fever, and the movements were still present.

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#### 42. TWO CASES OF MICROCEPHALY.

By EDMUND CAUTLEY, M.D.

THE case shown was a boy aged 5 years, the eldest of three children, the others being healthy. The mother has had no miscarriage and her confinement was a good one, without instruments. The child was thought to be three or four weeks premature. There is a family history of insanity and epilepsy on the mother's side, but not in the parents themselves. At the age of nine months it was first noted that he did not try to use his hands. Nystagmus, rotatory and lateral, and head-jerking were noticed at eighteen months. The head-jerking differed somewhat from the simple form often seen, for it came on when he was asleep; before that he used to bang his head in temper. He is excitable, destructive, and only fairly clean in his habits. He is fairly well grown and nourished, and of a good colour. His head only measures eighteen and a half inches. The teeth are fairly good; he bites his nails, and has lost a portion of the terminal phalanges of the left thumb and first finger. He uses his hands in a purposive but clumsy manner. There is partial flexion and rigidity of the knees; the

knee-jerks are absent, and he is flat-footed, and can neither stand nor walk. He began to talk a little about a year ago. There are old scars about the knees from burns, and sensation appears blunted, for he does not cry from pain when burnt, or when he bites his fingers. He is very nervous, and peculiarly frightened of the noise of rain. Although he has been under observation for nine months there is no definite improvement.

The second case of the same condition was that of a boy aged 4 years and 2 months, the third child of healthy parents. The eldest is 19 years old and healthy. The second died from imperforate anus. Confinement was easy, without instruments. He came under observation at two years of age, at which time his head measured 17 inches. He had sixteen teeth, the first at ten months, and was a little rachitic. His appearance was rather imbecile. For three or four months he had been constantly rocking himself backwards and forwards, and had the typical "mandarin" nodding movements of the head. The palate was somewhat high; there was no nystagmus, and no rigidity or spasm of the limbs. He could not stand, walk, or talk, but was good-tempered. Since then he has improved, and his condition a year ago was as follows:—walks a little, cannot talk, habits dirty, takes no interest in anything, very bad-tempered, good teeth, well grown, and a good colour. Head measures 18½ inches. No head-nodding for ten months.

His present condition shows a little improvement. The head is larger and the child can walk feebly, but cannot talk.

He called attention to the great similarity of these two cases in the size of the head, the head-jerking, and the mental condition. He regarded them both as typical cases of microcephalic idiots, due to imperfect growth and development of the brain. He was not prepared to recommend operation, believing that the condition was not due to a premature synostosis of the cranial bones. The prognosis was very bad as regards recovery, but a

certain amount of improvement might be obtained by careful and judicious training.

(*Exhibited March the 15th, 1901.*)

### Discussion.

**Dr. Leonard Guthrie** said the loss of the terminal phalanges in the fingers of the left hand with the general anaesthesia suggested some such condition as syringomyelia in addition to the microcephaly. He did not regard it as traumatic. Some years ago there was much hope that such cases might be benefited by craniectomy, but they did not improve. It was supposed that the children were idiots because the brain had not room to expand. The fact was that the skull-cap did not enlarge because the brain did not. The late Sir George Humphrey examined eighteen such skulls, but found no evidence of pressure, neither did the symptoms suggest pressure on the brain. He advised that the present case should be left alone.

**Mr. Tubby** said he remembered performing four craniectomies—three linear and one horseshoe. One was alive and in Earlswood. Of the other three, one died on the day of the operation; one died a week afterwards, of diarrhoea; the fourth he had not been able to follow up. In two cases which he saw post mortem he was impressed by the extreme deformity of the brain. In one case the brain was smaller on one side than on the other, there was porencephalus in the white matter, and one or two abnormal fissures. In the other case the brain was symmetrical, and in the inferior parietal lobule there were an immense number of minute convolutions. He thought the days of craniectomy for that condition were past. The skull was very thick, and with one of them he had an anxious time with a vessel in the bone, which was rather larger than the radial artery.

**Dr. Sutherland** agreed with Dr. Guthrie's remark about the phalanges. The child seemed quite insensitive to pain in the arms. He thought it would be worth while to try and ascertain whether syringomyelia was present.

**Dr. Cautley**, in reply, agreed that there might be some syringomyelia present. The child never cried when it was being burnt. It must be a great blow to surgeons to part with an operation, but he thought there was no benefit to be obtained from craniectomy.

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## 43. A CASE OF NEPHRITIS IN A NEWLY BORN INFANT.

By HENRY ASHBY, M.D.

CHARLES B—, aged four weeks, was brought by its mother to the out-patient department of the Manchester Children's Hospital in January, 1901, with the following history :—Mother is healthy and has had five children ; one was still-born, one died of wasting, the others are living and well. Mother was strong and healthy during her pregnancy. The infant appeared quite well when it was born, but on the following day the midwife noticed it was swollen in the face ; it has suffered since from much vomiting and diarrhoea, and has passed little urine. It has been swollen more or less ever since the second day.

When admitted to hospital it was very œdematos, the face, trunk, and limbs being very anasarcaous ; it was sick once and passed some loose stools, but no urine was obtainable. Convulsions, mostly clonic, supervened, and it died twenty-four hours after admission. Temperature 95°—97° F.

At the post-mortem examination there was general œdema, extensive haemorrhagic pneumonia ; the heart was contracted, but not dilated or hypertrophied ; the liver was gorged with blood. The kidneys weighed together 1½ ounces ; they were markedly lobulated like foetal kidneys ; the capsules were thickened and adherent, but stripped without tearing the kidney substance ; their surfaces were pale, and the stellate veins much engorged. On section the cut surface was pale and fatty-looking, the pallor being much more marked than in the most high-grade anaemia, and there was very little difference between the cortex and medulla. The vessels were indistinctly marked. The cortex, if anything, was narrower than normal.

The microscopical examination showed "choked" kidneys, with extensive epithelial and fibroid changes. The following is a summary of the changes noted:—Capsule thickened, fibroid tissue is present surrounding the capsules of Bowman, convoluted and straight tubes. Nearly all of the glomeruli are surrounded and compressed by a fibro-cellular growth, which appears to have put most of the glomeruli out of action; only here and there is a comparatively normal glomerulus seen. The convoluted tubules are for the most part dilated and choked with fibrinous cylinders; in these the epithelium is mostly flattened, in others the cells are swollen and very coarsely granular. The straight tubules are choked in a similar manner (see Plate IV). The blood-vessels and capillaries are everywhere gorged, and the small arteries appear thickened. Examination of the lungs showed acute haemorrhagic pneumonia. The liver was gorged with blood; there was no hepatitis.

The history of œdema commencing on the second day after birth, as well as the extensive and late changes in the kidneys, suggests that the nephritis commenced some time before birth, but this cannot be confidently asserted. No cause could be assigned for the rare event of an intra-uterine nephritis; the mother's health was good, and there was no evidence of syphilis. For the greater part of intra-uterine life the kidneys are physiologically inactive, though in the latter weeks they are believed to excrete a small amount of urea and uric acid, the urine being passed into the liquor amnii.

The literature concerning intra-uterine nephritis or nephritis in young infants is scanty. In cases of congenital hydronephrosis the kidneys are apt to suffer from a form of cirrhosis or cicatrisation. Carpenter\* records a case of nephritis in a syphilitic infant of five weeks, and Henoch† records one of the same age in a non-syphilitic

\* George Carpenter, 'The Syphilis of Children in Every-day Practice.'

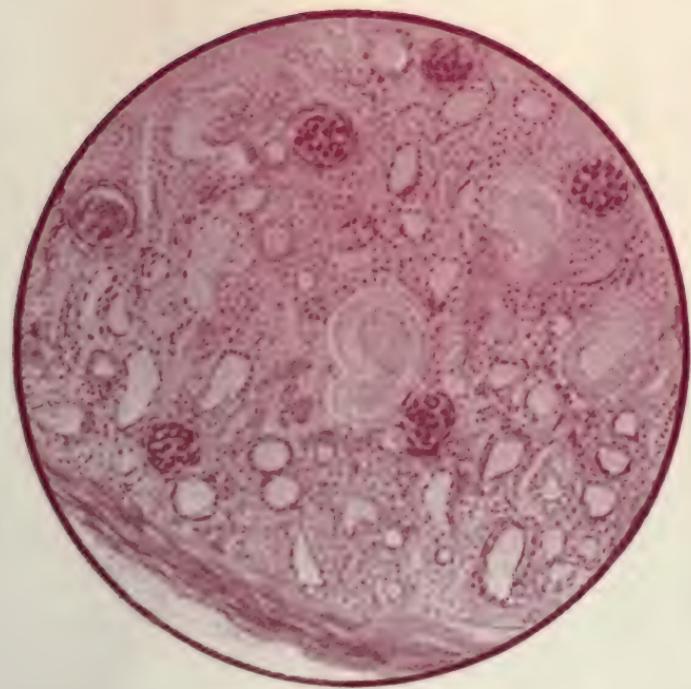
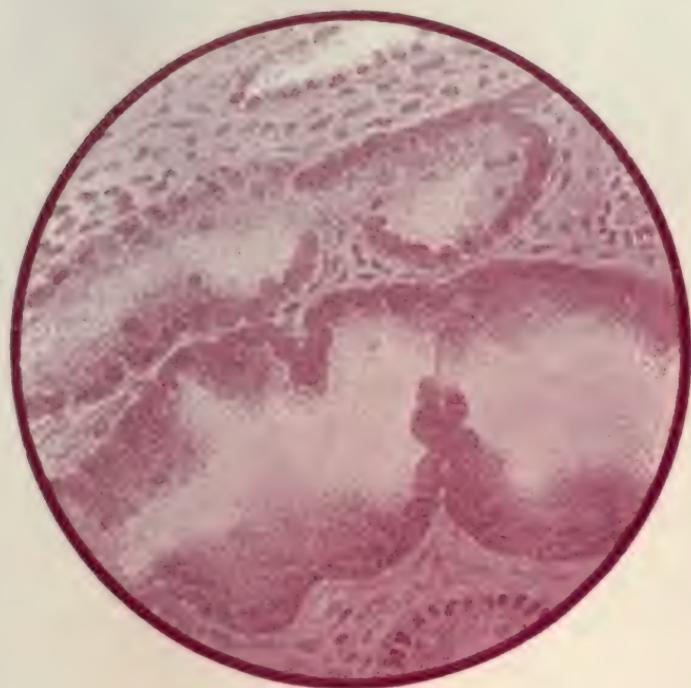
† E. Henoch, 'Lectures on Diseases of Children,' vol. ii, the New Sydenham Society.





PLATE IV.

Illustrating Dr. H. ASHBY's case of Nephritis in a newly born  
Infant.





infant. Both cases were verified by post-mortem. It is hardly necessary to add that oedema without albumen in the urine, or only a trace, is common in infants who suffer from marasmus following diarrhoea or gastro-intestinal catarrh. In the majority of such cases there is no nephritis, though slight changes may be noted in the renal epithelium, the result of toxine poisoning.

I have to express my obligations to Mr. A. Hill for making the post-mortem and cutting sections of the organs.

(*Read March the 15th, 1901.*)

### Discussion.

**The Chairman (Dr. Cautley)** said it was very rare to meet with a condition of that nature. Was it Dr. Ashby's experience that albumen was almost constantly found in the urine of newborn children? Personally he had nothing to do with newborn children. He would like to ask whether in the present case there might not have been some chill or infection subsequent to birth. Possibly the child had been washed in cold water directly after birth, and that might exaggerate the condition of the kidney and convert it into a true nephritis. Was it possible there had been any infection through the umbilical cord?

**Dr. Guthrie** asked whether there were any signs of congenital syphilis about the case. He had never heard of congenital nephritis, but conceived it was possible, and that it could be of specific nature, and might account for the chronic interstitial nephritis which came on later in children.

**Dr. George Carpenter** said, with regard to the remark of Dr. Guthrie as to nephritis in congenital syphilis, he thought that an important consideration. He had seen one such case during and after life, and that was in a child five weeks old. The microscopical changes were very marked, and there was an extreme amount of interstitial and catarrhal nephritis. During life the child had dropsy, epithelial and blood casts in the urine, and many of the epithelial casts were granular. He suggested the present case might be one of syphilitic kidney. He had seen two other cases of acute nephritis in syphilitic infants, but they recovered under antisyphilitic remedies. In his experience lobulation of the kidneys was not very uncommon. One of Dr. Ashby's drawings showed proliferation of the endothelium of the capsules and patchy fibro-cellular infiltration of the stroma, and in this respect suggested a scarlatinal change. In the case

of syphilitic kidney, however, to which he drew attention, the microscopical appearances were very similar, the difference being one of degree merely. His specimen was, if anything, more advanced than Dr. Ashby's.

**Dr. Ashby** (Manchester), in reply, said he had no knowledge of the composition of urine in newly born babies, but he thought the albumen only amounted to a trace. It was quite possible, as was suggested, that it was a case of post-natal nephritis. He judged that the condition was congenital because the oedema was present on the second day, but of course it might have been due to an early chill. One would say that a white kidney, such as that in the present case, was not produced in four weeks. The suggestion that the case might be syphilitic was worthy of consideration. Close questioning of the mother failed to throw any light on that, except the fact of a miscarriage. He would try to obtain the full history. To him it appeared to be of the exact type of post-scarlatinal nephritis. Glomerular nephritis was not very marked in this case. In places one third or one fourth of the capsule of Bowman was filled up with fibrous tissue.

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#### 44. CLINICAL CASES AND SPECIMENS.

By EDMUND CAUTLEY, M.D.

##### *A Case of Aortic Stenosis.*

ROBERT W—, aged 7 years, is free from a family history of rheumatic fever as regards the parents. The paternal grandfather, however, had rheumatic fever. He is the third of four brothers. The eldest has no *morbus cordis*. The second has been under my care for rheumatic fever—a mild case. The fourth child has had similar rheumatic pains and a sore throat, and now has mitral regurgitation.

He was breast-fed for nine months, and suffered from rickets. *Morbus cordis* was diagnosed at two years old. He had measles three times, the first attack after the heart disease was diagnosed. He had no pains in the

joints, nor did he experience sore throat. He is a fairly well-grown boy of good colour. He stammers. The heart's apex is in the fifth space in the nipple line. Over the aortic area there is a well-marked systolic thrill and murmur. The murmur is loudest over the second right intercostal space; it is conducted along the great vessels, and is heard almost all over the precordium. The pulse is 96 to the minute, small and irregular.

*A Case of Congenital Morbus Cordis; ? Tricuspid Incompetence plus a Patent Septum Ventriculorum.*

Robert E—, aged 1 year, is the fifth child. The second was born at seven months, and died. The fourth died of pertussis. Two sisters are healthy. There is no history of miscarriages.

He was a big baby at birth, and has been breast-fed. Lividity was first noticed at the age of a few weeks; it was not continual, but came on when he cried or got excited.

He is now a large fat child, weighing 20 lbs., and is blue about the nose, cheeks, lips, and extremities. The toes and fingers are a little bulbous.

The cardiac dulness extends half an inch to the right of the sternum. A systolic murmur is present over the whole cardiac area. It is loudest in the epigastrium and over the lower half of the sternum, and is not conducted to the right; it is conducted towards and heard loudly at the apex. It is not heard well above the level of the third rib; it is lost in the axilla, and is not heard well behind. There is no thrill.

*Multiple Exostoses in Three Children of the same Family.*

There are seven children in the family, and there is no family history of exostoses. The eldest and the two youngest are free from excrescences. The age and sex of those affected are as follows:—Frederick, aged 12

years; Florence, aged 9 years; and Harriet, aged 8 years. All the children appear healthy. In no case is there an exostosis on the head. The lumps are numerous and large. They are chiefly seated at the epiphyses, and at the insertions of muscles, *e.g.* the deltoids. Some are situated on the ribs, knees, ankles, shoulders, and elbows. The radial epiphyses seem especially susceptible. The mother thinks they are more numerous than they were, and that they are increasing in size.

*Four Specimens of Congenital Hypertrophic Stenosis of the Pylorus.*

These four cases have occurred in the practice of the Belgrave Hospital for Children during a period of less than four years.

Specimen 1 was taken from a male infant aged 14 weeks.\* Specimen 2 was from a male infant aged 7 weeks.\* Specimen 3 was from a female infant aged 3 months;† and specimen 4, from a male infant aged 2 months, was recently under the care of Dr. Ewart.‡

*Tuberculous Ulcers of the Small and Large Intestines.*

These were removed post mortem from a girl aged nearly five years, who had been ill for over a year.

The chief symptoms were anorexia, wasting, abdominal pain, and diarrhoea. Haemorrhage from the bowels occurred in the later stages, and the child suffered from troublesome vomiting and almost complete anorexia. Death resulted from exhaustion.

*Post-mortem.*—There were numerous ulcers in the small intestine, some of them completely surrounding the gut. On the peritoneal surface of the ulcers were deposits of miliary tubercle and adhesions to adjacent ulcers.

\* 'Med.-Chir. Trans.,' vol. lxxxii, 1899.

† 'Lancet,' 1900, vol. ii, p. 256.

‡ 'British Med. Journal,' 1901, vol. i, p. 765.

Two large ulcers were present in the colon. One of these had produced a stricture which only admitted a good-sized pencil. There was no general peritonitis.

#### *A Monoventricular Heart.*

This was removed post mortem from a boy who died, aged four months, of capillary bronchitis and lobular pneumonia. He was the fifth child: one died of meningitis, four are living. He was a "fine baby born," and was breast-fed for three months. He was then weaned and given cow's milk, when he began to waste. When first seen he was moderately wasted. There was a loud systolic murmur conducted all over cardiac area. He died from the pulmonary affection above mentioned. His weight at death was 8 lbs. 13 oz., and he had gained 6 oz. in a week.

*Condition of the Heart.*—There is one large thick-walled ventricle, the foramen ovale is open and large, and the ductus arteriosus closed.

(*Exhibited March the 15th, 1901.*)

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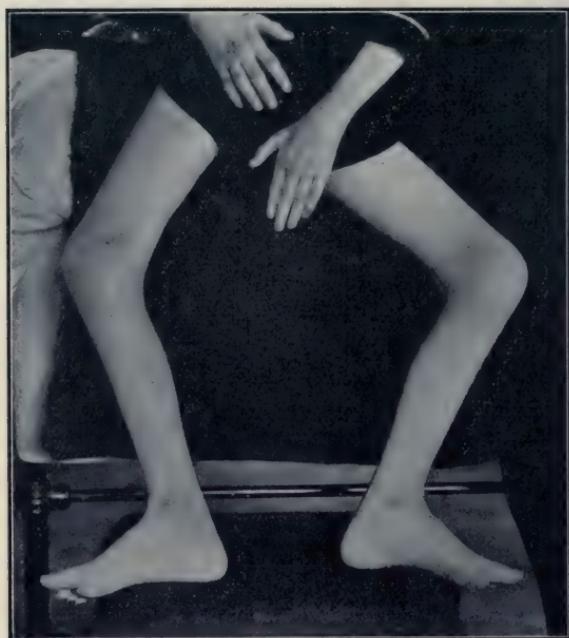
#### 45. CASE OF OSTEO-ARTHRITIS IN A BOY OF ELEVEN YEARS.

By A. E. SANSOM, M.D.

GEORGE C—, aged 11 years, a patient under my care at the London Hospital, shows extensive polyarthritis. The small joints of the hands are enlarged and the fibrous structures thickened, the muscles (the interossei, the thenar and hypothenar eminences) are much wasted. The wrist-joints are enlarged, and permit very little movement; the forearm muscles are wasted; the tips of the fingers are moist; there is local sweating (giving the

warm, moist, velvet sensation). The elbows, more especially the left, are enlarged, and movement is limited ; the shoulder-joints are also affected, especially the left, and movement is limited.

FIG. 14.



There is complete ankylosis of both hip-joints ; the knees and ankles and some of the toe-joints are enlarged and the muscles of the lower limbs much wasted. There is also thickening about the cervical vertebræ ; atlo-axoid rotation is impaired (spondylitis).

There is, therefore, very extensive arthritis of the form known as osteo-arthritis, or arthritis deformans.

There is no enlargement of the spleen, therefore the case differs from that so well described by Dr. Still.

It is stated that the boy was quite well until September last, when he fell ill with a febrile disease said to





PLATE V.

Illustrating Dr. A. E. SANSOM's case of Osteo-arthritis in a  
Boy of eleven years.





PLATE VI.

Illustrating Dr. A. E. SANSOM's case of Osteo-arthritis in a  
Boy of eleven years.





have been "rheumatic fever." There was much sweating, both by day and night. The sequence of the affection of the joints appears to have been (1) the wrists, (2) the left shoulder, (3) all the joints of the lower extremities. The pain did not shift from joint to joint, but the pain and swellings have continued all these past six months.

It has been said that a large number of these cases of osteo-arthritis are initiated by an attack of rheumatic fever. It was asserted that this was the case in this instance. On the other hand, it is very distinctly shown that such form of arthritis can arise in a definite relation with other febrile diseases, and when there is no rheumatism at all. I venture to urge that observers should hesitate before using the term "rheumatic fever" as an expression of the mode of onset in these cases. Fever there undoubtedly is; sweating is abundant, but frequently the sweating is local; there are often heart symptoms, but (as in this case) no structural disease of the heart; the nerve mechanism being greatly disturbed in the sense of tachycardia, arrhythmia, or bradycardia. The nervous system of this boy reacts rapidly. He is highly sensitive and intelligent. I think there are some pigmentations of skin as described by Spender.

The morbid affection of the joints, and of the synovial and adjoining structures, is not limited in time, as is usual in rheumatism, but is protracted through many months.

The vascular changes in the synovial fringes are more intense, and the bones greatly suffer; there is a strange combination of hypertrophy and atrophy, of intense hyperæmia and of wasting. I have said that there is a sort of "mania of the joints."

In the treatment I consider that salicin and the salicylates have no influence for good in these cases. The boy has greatly improved under a course of massage and under good nutritive treatment.

*(Exhibited April the 19th, 1901.)*

### Discussion.

**Mr. Clement Lucas** asked whether, when the disease commenced, there was any possible suppurating focus, from which infection might have taken place; he suggested suppuration about the jaws, tonsils, ears, or the presence of ophthalmia. He thought it not improbable that when all joint diseases had been worked out it would be found that some organism was at the bottom of most, if not all of them. In a case in an adult which was believed to be osteo-arthritis of the hip-joint—a distended hip with much pain, lasting a long time—he cut down on the hip and took a cultivation, which was found to contain staphylococci. He believed an able bacteriologist had recently found a specific diplococcus associated with acute rheumatism. His second question was whether any bacteriological examination of the secretions of the joints had been made in the present case. As in the case of gonorrhœal rheumatism, one would possibly find organisms in the joint in the early stage.

**Dr. Theodore Fisher** (Bristol) referred to a case narrated in the 'St. Bartholomew's Hospital Reports,' in which a late resident physician seemed to consider that organic lesions were not very uncommon in association with rheumatoid arthritis. He argued that it was simply a variety of rheumatism due to the idiosyncrasy of the patient.

**Mr. Burgess** (Harlesden) asked whether there was any history of rheumatism in the child's family. He had a case at present of the same age as the patient, in which nearly all the members of the family suffered from rheumatism, either acute or chronic.

**Dr. George Carpenter** said the skiagrams showed no alteration in the bones, but around the joints a shadow could be seen, representing some material around the part, so that the thickening of the joint was apparent rather than real. He thought the case was on all-fours with cases of meningitis with secondary joint disease. In the plastic material around the joints Still had found a specific organism. He was of Mr. Lucas's opinion that the cause was probably to be sought in the workings of micro-organisms.

**The Chairman (Dr. Sansom)**, in reply, said there had been no evidence of suppuration. He fully recognised the important point raised by Mr. Clement Lucas. No bacteriological investigation had been carried out in the case, because the boy was put under massage and treated at once, and had improved so much that the bacteriology had not been inquired into. He agreed with Dr. Carpenter that there was evidence of plastic material around the joints rather than of thickening of the bones. He believed it to be a recovering case. Even if micro-organisms were found in the plastic material, that settled nothing; it did not show they were causal, or that they did not produce a change in the nervous

system. As Dr. Carpenter had mentioned, meningitis might produce such an effect. Dr. Fisher had truly pointed out that organic heart disease did sometimes occur in osteo-arthritis, but it was often an epiphomenon, and anything could be an epiphomenon. The argument was against it being causal. In reply to Mr. Burgess, there was no rheumatic heredity in the case to be traced.

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#### 46. CASES OF MUSCULAR ATROPHY IN CHILDREN.

BY JAMES TAYLOR, M.D.,

AND

J. H. SEQUEIRA, M.D.

DR. JAMES TAYLOR showed a case which he believed to be a connecting link between cases of pseudo-hypertrophic paralysis, in which, as is well known, no lesion of the spinal cord is found, and cases of chronic degeneration of the anterior horn-cells of the spinal cord (progressive muscular atrophy).

The boy, who was ten years old, had been under observation for three years, had not become obviously worse, and at times had distinctly improved. He was not able to walk until five years of age, and was then in fairly good health, but at six years of age he began to get worse again. The disease was not symmetrical, and there were marked fibrillary twitchings in the affected muscles. The reason he thought it was possibly a connecting link between pseudo-hypertrophic paralysis and true spinal paralysis was that there was a certain degree of hypertrophy of muscles in some parts, but also considerable wasting in others; and in muscles which were wasted there was some fibrillary twitching, which was very distinct when the child was under observation last year. Another feature against the likelihood of it being pseudo-hypertrophic paralysis was that he materially improved while under observation the previous summer.

In connection with Dr. Taylor's case, Dr. Sequeira showed three boys suffering from pseudo-hypertrophic paralysis. Each was an advanced case of the disease, and had been under observation for some years. The characteristic phenomena were present. An interesting feature was that although the three patients were members of large families, there was no similar affection in the brothers and sisters.

(*Exhibited April the 19th, 1901.*)

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#### 47. CASES OF NÆVO-LIPOMA IN CHILDREN.

By A. B. ROXBURGH, B.C.H.

(INTRODUCED.)

THREE cases of nævo-lipoma were demonstrated.

The first case showed an extensive nævus of the venous type, affecting the leg and lower parts of the thighs, with marked thickening of the subcutaneous fatty tissue.

The second case was that of a child of two months of age with a large lipoma of the thigh.

The third case was a baby three months old with a fatty growth of the axilla-pectoral and infra-spinous regions, and it also involved the under surface of the arm. A portion of this part of the tumour was nævoid.

(*Exhibited April the 19th, 1901.*)

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#### 48. DISLOCATION OF PATELLA PERSISTING AFTER MacEWAN'S OSTEOTOMY.

By DOUGLAS DREW, B.S.

THE case was that of a child of six years of age with rickety deformity of the lower limbs. Twelve months pre-

viously MacEwan's osteotomy was performed for marked genu valgum, with dislocation of the patella outwards when the knee was flexed. The result of the osteotomy was completely satisfactory so far as the straightening of the limb was concerned, but it had failed to cure the dislocation. Splints had been worn since the operation. A second operation for the cure of the dislocation was going to be performed.

He proposed, unless improvement occurred during the next few months, to expose the inner side of the knee, excise a portion of the capsule, and so shorten up the capsule on the inner side. As there was a deficiency in the patellar surface of the femur, he would deepen that and replace the patella. He would get the wound thoroughly healed, and at the end of fourteen days begin passive movement so as to avoid any stiffness about the joint. In 1889 he saw a similar case, which was under the care of Mr. Pollard, the patient being a girl of sixteen years, with marked dislocation of the patella. Mr. Pollard excised a portion of the capsule on the inner side of the joint, and the result was most satisfactory.

*(Exhibited April the 19th, 1901.)*

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#### 49. A GUMMA IN THE WALL OF THE HEART OF AN INFANT.

By J. PORTER PARKINSON, M.D.

THE specimen exhibited is a gumma in the wall of the heart of an infant aged 3 months. The child was brought to the hospital in a dying state. At the post-mortem examination the body was seen to be very wasted, with the remains on it of a blotchy rash. In the lungs were numerous masses of yellow tubercle, which in places had softened into small cavities. In the wall of the left ventricle, just below the auriculo-ventricular groove,

close under the visceral pericardium, was a pale, tough, yellow mass, three quarters of an inch in diameter and a quarter of an inch thick, well marked off from the adjacent muscle. The valves and rest of the heart appeared healthy. There were numerous tubercles in the spleen, but the other organs were healthy to the naked eye.

Mr. Targett's report of the microscopic appearance of the growth was as follows:—"The nodule in the heart is composed of young inflammatory tissue in various stages of development, and the adjacent muscle is infiltrated and destroyed. The lesion is evidently syphilitic, and may be regarded as a gumma of the heart." The rarity of gummata in this situation in infants is shown by the fact that in the whole of the records of the Pathological Society but one similar specimen appears; this, which is alluded to by Mr. J. Hutchinson in his work on 'Syphilis,' was exhibited by Mr. Shattock in 1880.

This is the only case I can find in a rather hurried review of English and foreign literature of a similar pathological specimen.

(*Exhibited April the 19th, 1901.*)

### Discussion.

**Dr. Theodore Fisher** (Bristol) said he had had a case of extensive fibrosis of the heart in a very young child, and he had seen a small tubercular mass in the heart; but he would regard the present case as one of gumma, not tubercle. In the latter condition there would be extensive caseation, and merely a narrow encircling band of fibrous tissue. In a case of extensive tubercular fibrosis of the heart there was thickening and adhesion of the aortic valves. There was no evidence of congenital syphilis, and probably the condition was the result of myocarditis associated with foetal endocarditis.

**Dr. Porter Parkinson**, in reply, said there was no caseation in the centre of the heart lesion; it looked like gumma, and was very hard. Then there was Mr. Targett's report.

## 50. PERFORATING GASTRIC ULCER IN A YOUNG CHILD.

By J. PORTER PARKINSON, M.D.

THE specimen exhibited is a perforating acute gastric ulcer in a male child aged 2 years and 2 months. This child had suffered from gastric symptoms and occasional vomiting, and slight fever for ten days, when suddenly it

FIG. 15.



vomited blood and became collapsed, with typical symptoms of acute peritonitis, and died sixty hours later.

At the *post-mortem* examination the peritoneal cavity contained about a pint of turbid fluid containing flakes of lymph. The omentum was thickened and friable, and matted down by recent adhesions. No tubercles were seen. The liver and spleen appeared normal. The

cortices of the kidneys were pale and swollen, and the distinction between cortex and medulla was lost.

Near the centre of the posterior wall of the stomach, as seen in the specimen and photograph shown, is a punched-out ulcer with slightly thickened edges, and a perforation a little larger than a pin's head at its base, the peritoneum forming the posterior wall of the small bag of the peritoneum was adherent to the stomach, and there was no escape of stomach contents. There was very slight swelling of one or two Peyer's patches, but neither here nor elsewhere was any sign of tubercle present. One other small ulcer is to be seen in the posterior wall of the stomach near the one described.

The occurrence of ulceration of the stomach in a child of this age is exceedingly rare ; in the whole of the records of the London Hospital Dr. Fenwick states there are only three cases reported, and in each case it was obviously secondary to some other disease, and Rokitanski in the whole of his experience never encountered it in a child less than fourteen years of age. The cause in this case seems doubtful ; the symptoms during life appeared to suggest some general infection, but the post-mortem appearances did not bear this out ; and of tubercle, which is the usual cause of gastric ulceration in children, there is no trace to be found. (*Exhibited April the 19th, 1901.*)

### Discussion.

**Dr. Theodore Fisher** (Bristol) said the case of perforating gastric ulcer was very interesting from a pathological point of view. It was remarkable how frequent small follicular ulcers were seen in the stomachs of children, and how comparatively rare they were in adults. It was strange that large ulcers in children did not more often result. A small ulcer by the side of the large one in the specimen looked as if it commenced in a follicle, and perhaps that was the origin of the larger one also. The pathology of duodenal ulcer and stomach ulcer was supposed to be closely connected, and his colleague, Mr. Kendal, had almost decided to bring up a case of acute duodenal ulcer occurring in a new-born child. Haemorrhage from the bowel commenced about twenty-seven hours after

birth, and in forty-eight hours the child died. At the post-mortem a slough about half the size of a finger-nail was nearly detached from the first part of the duodenum. He (Dr. Fisher) took cultures from the spleen, and found in them the *Staphylococcus pyogenes aureus*. In that case the ulceration of the duodenum had started in an acute infection. Recently some cases had been brought before the Society of hæmatemesis in association with appendicitis, chiefly occurring in children, and he thought it was correct to say that small follicular ulcers had been found in those cases which had proved fatal.

**Dr. Porter Parkinson**, in reply, was on the point of suggesting that the perforating ulcer had originated in one of the follicles; it seemed extremely likely.

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## 51. CASES OF LUPUS TREATED BY FINSEN'S METHOD.

By J. H. SEQUEIRA, M.D.

Two boys and a girl were shown who had suffered from lupus, which had been treated at the London Hospital by the Finsen method. Photographs of the patients before treatment were handed round, and attention was called to the excellence of the scars and the advantage of this form of treatment over ordinary surgical methods, especially when the disease attacked the face. The chief drawback was the time occupied by this method of treatment. One of the patients, in whom nearly the whole of the left cheek had been affected, required over fifty sittings.

(*Exhibited April the 19th, 1901.*)

### Discussion.

**Dr. Sutherland** asked whether excision would not have produced as good a result, and much more speedily. Was the light treatment a guarantee against recurrence?

**Dr. Sequeira**, in reply, said that in the girl excision might have been done, but not in the others. Many people objected

to operation, and it must be remembered that the Finsen method was painless. Again, while excision did not guarantee against recurrence, he had seen no cases return where the light treatment had been adopted which had now been practised for four years.

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## 52. A CASE OF INFANTILE SCURVY.

BY DAN MCKENZIE, M.D.

P. R.—, a female aged eleven months, was brought to me about fourteen days ago suffering from a peculiar livid swelling of her gums, but no special significance was attached to it until three days ago, when I was called to see the child on account of increasing weakness, with continual crying, loss of power in and tenderness of the lower limbs.

The crying is most marked when the child is moved or touched. In fact, so much does the child dread the slightest movement that she clings convulsively to her mother when any attempt is made to make her stand or walk. She is only comfortable when lying down. Handling or passive movement of the lower limbs is equally resented by the patient. Careful observation shows that the tenderness is not localised to any particular region of the limbs, as would be the case were the child suffering from some joint disturbance. Although the legs lie quite still and motionless there is no paralysis, for she can move her legs and feet, and the tendon reflexes are present. There is, perhaps, some bending of the right tibia near the ankle-joint, but no fulness or swelling can be detected along the bony surfaces. The muscles are soft, flabby, and tender. In the skin are several fairly large patches of ecchymosis.

Examination of the trunk reveals an absence of rickety signs. There is no pot-belly, and no rachitic rosary,

although the costal arches comprising the lower segment of the chest wall are flattened somewhat. She sits in a bunched-up attitude from weakness of the spinal muscles.

The shape of the head does not suggest rickets. The anterior fontanelle is closed. There is a considerable amount of perspiration from the head, the pillow being wet in the morning. The child's face is pale, but the mucous membranes are fairly well coloured. On the lower left eyelid is a patch of ecchymosis. There is no proptosis. Four teeth—two incisors, above and below—have made their appearance. The gum around the lower incisors is normal in appearance. In the neighbourhood of the upper incisors, however, the gum is swollen, glazed, and pouting, and of a deep purple or mulberry colour. I call attention to the fact that the gum round the teeth which had erupted since the onset of scurvy is the seat of scorbutic change, while in the neighbourhood of the teeth which were cut before the advent of the disease there is no alteration in the mucous membrane.

This child has been reared entirely, with the exception of a little potato added a few weeks ago, upon "Allenbury Food No. 1."

The Allenbury Food, which has been credited with causing many cases of scurvy, I know not with what justice, has been entirely stopped. Nansen's opinion is that scurvy is induced not so much by the absence of fresh food as by the presence of ptomaines in improperly preserved foods. If the cause, then, is positive, and not merely negative, it is necessary to remove any suspicious article from the dietary, in addition to the routine methods of treatment.

(*Exhibited April the 19th, 1901.*)

#### Discussion.

**Dr. Sanders** (New Cross) [introduced] mentioned a case which he had been treating for some time, the child having been fed on various meat preparations. It was fed, after being seen, on green vegetables and lime-juice. He showed photographs of

the case. He put the legs in plaster of Paris, and there was much improvement; the child was now free from pain, whereas it could not bear the clothes to be shifted previously.

**Dr. George Carpenter** said he could not find that the child was rickety. The condition used to be called "acute rickets," but often there was no rickets in these cases. Moreover the patients were not always anaemic. He had been in a house recently where "Allenbury Milk No. 1" was used, and the infant was suffering from scurvy. The proprietors now recommended that raw meat-juice should be given with the milk—he presumed with the idea of preventing scurvy. He had recently brought to his notice by Dr. Ashby the case of a doctor's child who had that condition of gums, and the father had been carefully treating them with chlorate of potash, with the result that the liver was much enlarged and the child nearly died. There were several children in the family, who had all been previously fed in the same way, but only this, the third or fourth child, suffered from scurvy. It looked as if there were some special idiosyncrasy in the child, and that the proprietary food administered was not the only cause.

**The Chairman (Dr. Sansom)** said a well-instructed doctor had asked him a question about chlorate of potash. The gentleman said he had taken chlorate of potash, but it always disagreed with him. He (Dr. Sansom) believed chlorate of potash to be a dangerous remedy, and it needed using very carefully indeed. It had a destructive influence on the red corpuscles. Some people could not take chlorate of potash. He urged that practitioners should think twice before administering that drug, especially to young subjects.

**Dr. Dan Mackenzie** (Leytonstone), in reply, said there were no signs of rickets about the child, which had been fed upon the "Allenbury Milk No. 1" all its life, and upon nothing else until a month ago, when it had a little potato; and yet in that month scurvy appeared. He thought the reason was that the child had an attack of broncho-pneumonia, which weakened its condition and so brought out the idiosyncrasy. Nansen's suggestion was worthy of note, namely, that scurvy was not due to want of vegetable food so much as to the ptomaines in imperfectly preserved food.

## 53. A CASE OF OEDEMA OF THE EYELIDS OCCURRING AFTER A BATH.

BY THEODORE FISHER, M.D.

THE following case, although it may be considered in itself of trivial importance, is, I trust, of sufficient interest to bring before the notice of this Society.

A girl aged 9 years was brought to the out-patient department of the Bristol Children's Hospital for simple jaundice. On the second visit the mother mentioned that frequently during the winter the child's eyelids had swollen after a warm bath. The swelling had usually come on within half an hour after leaving the bath, and had lasted from twelve to twenty-four hours. Being curious to test the truth of this observation, I paid a visit the next Saturday evening, the usual evening on which the bath was given, in order to see if the swelling had occurred. Unfortunately little or no swelling proved to be present, but a neighbour, an intelligent woman, was called in to substantiate the mother's statement. She mentioned that her own mother had died of Bright's disease, and described how, on first seeing the child with her eyelids swollen, she exclaimed, "Why, she's got the dropsy!" and immediately proceeded to examine the child's legs, after the manner of her mother's medical attendant, in order to see if they would pit on pressure. This she found was not the case. The mother of the child afterwards quoted the remark of the baker's boy, which is of some interest. He had seen the girl on one occasion with swollen eyelids on the day after a bath. A few days later he saw the child again, and noticing that she again possessed a natural appearance, said, "What a pair of eyes she had last week!"

Although I was unfortunate in not visiting the child when the swelling had come on, I asked the parents to let me know when it next occurred. On March the 9th the father called to tell me that the swelling was present, but

I was out, and as the child lived on the opposite side of Bristol, it was too late on my return home to think of trying to see her that evening. I went the following day, but the swelling had almost disappeared. On April the 7th I again received word that the eyelids had swollen. This time I was at home, and was able to prove for myself

FIG. 16.



that the occurrence was no myth. I arrived between two and three hours after the bath, and found the eyelids, more especially the lower eyelids, much swollen, each of which equalled half a walnut in size. There was some injection of the conjunctivæ, but the eyelids themselves were only reddened along the line of the lower margin of the orbits. When I arrived the child could look

fairly steadily at an artificial light, but during the development of the swelling much photophobia and lacrimation were said to have been present. On inquiry two days later I found that the swelling had disappeared by the middle of the day after the bath. Three specimens of urine, passed at different times of the day after the

FIG. 17.



swelling had occurred, were examined; none contained albumen. I had examined also three specimens of urine passed the day following the previous attack of swelling of the eyelids. All were free from albumen.

The child is rather small for her age, but can hardly be described as a delicate-looking girl. She does not seem to be troubled with headache or symptoms of

dyspepsia, and while possibly not a very active child, cannot be described as lethargic. Although the occurrence of the swelling is only occasional, at the times of its onset nothing unusual has been noticed in the health of the child. It is noteworthy also that when the swelling comes on, the only symptoms of discomfort are those of photophobia and lacrymation.

Amongst the more immediate probable causes, I have been unable to find any definite explanation of the fact that the swelling does not occur after every bath. The mother is very sure that no appreciable difference in the temperature of the water has been the cause, and the neat appearance of her house and children would lead me to believe that she is a careful woman, and that her word upon such a point can be relied on. No noteworthy differences in diet or in the time of taking food appear to have been present. On the last two occasions of the swelling of the eyelids, and I think I may say on the last three, the weather has been mild after a few days of cold. Possibly sudden alterations of temperature or of atmospheric pressure may be a predisposing cause.

Slight swelling of the eyelids is very common in children, and occurs most frequently in the morning. In some of the more marked cases I have found intermittent albuminuria, but I have now tested a considerable number of the slighter cases without finding traces of albumen in urine passed at any period during the day.

The liability to swelling of the eyelids seems to be in some instances a congenital peculiarity. There is at present a boy attending the out-patient department at the Bristol Children's Hospital, under my care, who frequently has some swelling of the eyelids. His father and one of his father's sisters are said to have suffered since they were children in the same way. When the father's eyelids are affected he is said to appear to be unwell, and to describe himself as feeling "all gone." Such a description of want of feeling of well-being seems to imply that there is loss of vaso-motor tone. Vaso-motor disturb-

ances, at least, appear to be capable of bringing out the swelling in a child predisposed to such swelling. For example, in one of the cases of swelling of the eyelids in children, in which albuminuria was present, sudden excitement such as would be occasioned by a quarrel with her brother was sufficient to produce rapid development of the swelling. The swelling would also sometimes follow an unusual display of physical energy, of which dancing round a barrel organ was given as an example.

I do not attempt to explain these occurrences of swelling of the eyelids. The association of some swelling and redness of the nose and cheeks with various slight abdominal disturbances is familiar to all. Whether such localised swelling is toxic or purely nervous in origin is, so far as I am aware, not definitely known. In swelling of the eyelids there is much more effusion into the tissues, and less superficial dilatation of the blood-vessels. Localised œdema, when irregularly distributed, is generally toxic in origin. When albuminuria is associated with swelling of the eyelids the swelling may possibly be due to some product of defective metabolism. In the above cases, however, where swelling has usually been well developed half an hour after a warm bath, it is more easy to believe that it owes its existence to vaso-motor than to toxic influences.

*(Read April the 19th, 1901.)*

#### Discussion.

**Dr. George Carpenter** asked whether any urticaria was present, and had the child any gastro-intestinal disturbance.

**Dr. Sutherland** asked whether there was any history in the family or in the child of either asthma or eczema.

**Mr. Sydney Stephenson** said he had had, on several occasions, children brought to him with swollen eyelids, and in more than one such case on undressing them he found patches of urticaria about the body. He had never obtained a history of repeated swelling of eyelids connected with a bath.

**Dr. Theodore Fisher** (Bristol), in reply, said Dr. Carpenter's idea had not occurred to him, but he thought the suggestion a valuable one. He would watch for the periodicity of the swelling. He had not definitely inquired about the points in Dr. Sutherland's question, but from the history, which was collected in the ordinary way, he believed there was at any rate no eczema.

## 54. A CASE OF ANÆMIA PSEUDO-LEUKÆMICA INFANTUM.

By WALTER CARR, M.D.

(INTRODUCED.)

THE child was admitted to the Victoria Hospital for Children on January 8th, 1901. The spleen was enormously enlarged, practically reaching down to the pubes, and filling the left iliac fossa. The blood showed the typical changes described by von Jakob in 1890. The child improved to an extraordinary degree under cod-liver oil, iron, and mercury. The spleen could now be felt two inches below the costal margin.

(*Exhibited May the 17th, 1901.*)

**Discussion.**

**Dr. Chaffey** (Brighton) thought the most remarkable point about the case was the wonderful reduction in the size of the spleen. He had seen cases of the kind from time to time, and they had become marasmic. After death he had found an enormous spleen. In some cases the size of the spleen was reduced, but he would like to hear to what the reduction of size of the spleen in this case was attributed; was it the medicine, or the diet? Some cases, if they could be kept alive, had got better in course of time, but the present child seemed to have improved in a marvellous way.

**Dr. Cautley** said he doubted whether there was any connection between the disease the child had and rickets, or congenital syphilis. Rickets occurred commonly in children, and congenital syphilis fairly commonly, and therefore one was apt to ascribe to those diseases other conditions which really had very little connection with them. Certainly in many such cases as the present one could find no evidence of syphilis in the child, nor history of it in the family, nor yet any evidence of rickets. He had seen several cases of the kind in which there was a lack of such evidence. Again, he thought the pathological changes which had been found post mortem had never been strongly confirmatory of syphilitic disease. On the other hand, he had no evidence to put forward as to what the cases were due to. In one case which he saw the spleen was remarkably large, and

the child developed ascites. An exploratory operation was done, but in that case the complication was due to a secondary tuberculous peritonitis. His own experience was that the prognosis was extremely favourable, and that very few of the patients actually died from the disease. Death was generally due to some concurrent complication.

**Mr. Susmann** (introduced), who showed the case in Dr. Carr's absence, in reply, said Dr. Chaffey seemed to regard the prognosis as grave in the cases he had seen. But were careful blood-counts made in those instances? He asked because the difficulty was to differentiate it from splenic anaemia. Dr. Carr's view was that the prognosis was not very bad, and that gentleman had great faith in iron. He could not say why, because the cause of the disease was not known. He agreed with Dr. Cautley that syphilis probably had little to do with the condition. The child, however, had the "hot cross-bun head," but no other signs of either rickets or syphilis.

**Dr. Chaffey** (Brighton), replying to Mr. Susmann's remarks, said he referred to cases some years ago, when he made a collection of them. There were no blood-counts done in those days. A considerable number of such cases were met with in London, but in Brighton he had not noticed them except very rarely.

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## 55. A CASE OF SPASTIC SPINAL PARALYSIS WITH CEREBRAL SYMPTOMS.

BY MONTAGU MURRAY, M.D.

(INTRODUCED.)

THE child was in ordinary health, mentally and bodily, until four years of age. There was no history of congenital syphilis. He then had an attack of whooping-cough, and shortly afterwards a severe fright.

His present condition showed loss of power in the legs, and to a less extent in the arms, a spastic gait, and increased reflexes.

The loss of intelligence had come on in the last three months. The pupils were widely dilated, but he had no

other eye symptoms. His symptoms could not apparently be classified under any recognised disease.

(*Exhibited May the 17th, 1901.*)

### Discussion.

**Dr. Cautley** regarded the case as one of extreme interest, but thought it was cerebral spastic paralysis, and that it belonged to the group of cases originally described by Little, though it was not true Little's disease, which were due to an antenatal condition or to injury at birth. He thought it was due to cerebral sclerosis, which was probably set up by encephalitis in sequence to some infective fever. The whooping-cough which the child had might have started a low form of encephalitis with sclerosis. Such cases might follow gastro-enteritis, or typhoid fever, or scarlet fever, or measles.

**Mr. Tubby** said he was inclined to agree with Dr. Cautley as to the nature of the case, though—and he spoke rather from the surgical standpoint—he really regarded it as a cerebral diplegia. The interesting point to him was as to prognosis. Of what future use would that child be? He thought the prognosis in cases of cerebral diplegia was bad, very few such patients reaching adult life, and if they did reach it they died off at between twenty and thirty years of age. Certainly the prospects were worst in those where the mind was deficient. In surgical practice a large number of these cases were seen, both cerebral diplegia and Little's disease, and he believed it was only during the last ten years that an attempt had been made to differentiate between the various kinds of cases; they were formerly all regarded as Little's disease. Little's disease differed very materially from the condition found in the present child.

**Dr. Blumfeld** asked whether there was any explanation of the extreme dilatation of pupils in the case. There seemed to be no other evidence of third nerve involvement. Could Dr. Cautley suggest a reason?

**Dr. Cautley** replied that he could not answer the question, as he did not examine the pupils, nor did he know what was the condition of the optic nerves. It was possible there might be some optic nerve changes in such a case. In this patient he regarded the prognosis as very bad, because the mental condition was getting worse. In the cases originally described by Little, however, the prognosis was not necessarily bad. The patients improved a great deal, and could be trained and educated.

**Mr. Susmann** (introduced), who showed the case for Dr. Montagu Murray, said the fundi were examined by Mr. Marshall, but nothing abnormal was found. The pupils reacted to light and to accommodation. Beyond the dilatation of the pupils there

were no eye symptoms. Could Dr. Cautley suggest where the lesion began?

**Dr. Cautley** replied that it was probably a cortical lesion, encephalitis following, and the pyramidal cells were probably atrophied.

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## 56. A CASE OF SPORADIC CRETINISM.

By D'ARCY POWER, M.B.

THE case of sporadic cretinism shown had been under the treatment of Dr. Wallis Ord in 1893.\* The boy had been under thyroid treatment for eight years, and had improved markedly. He was passing creditably through his school life, and was already in the third standard with a fair prospect of attaining the fourth standard, though his parents were wisely averse to having him pushed.

*(Exhibited May the 17th, 1901.)*

### Discussion.

**Dr. Robert Hutchison** said he would like to hear what had been the experience of other members of the Society as to the mental improvement in cretins. Every one knew such cases underwent enormous bodily improvement as a result of thyroid treatment, but those he had seen did not seem to benefit mentally nearly so much as physically, and that was an important feature in any prognosis. The present patient seemed to have improved mentally more than any other case he had seen. If treatment was not commenced in this case until the child was three years of age, there seemed to be great hope, when a very early start was made with the thyroid, of bringing about quite a normal mental condition.

**Mr. D'Arcy Power**, in reply to Dr. Chaffey, said  $1\frac{1}{2}$  grains of thyroid extract were given three times a day, total  $4\frac{1}{2}$  grains per diem. The administration had been continued for several years, and there had been no relapse.

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\* The 'Lancet,' vol. ii, 1893, p. 1114, case 2.

## 57. A CASE OF PAROXYSMAL ALBUMINURIA AND HÆMATURIA.

BY D'ARCY POWER, M.B.

A BOY, aged 9 years, was shown, who had been admitted and readmitted into the hospital at various times suffering from paroxysmal hæmaturia and albuminuria, associated with attacks of severe renal colic. He had improved so long as he remained in hospital, but became worse on his return to school. The physicians had handed him over for surgical treatment, and Mr. Power explored his right kidney by the lumbar route, hoping to find a stone. A thorough examination with the passage of a probe along the whole length of the right ureter failed to reveal any obstruction, and the wound united by first intention at the end of a week. He was on the point of being discharged from the hospital when his gums became spongy, and he showed undoubted evidence of scurvy, which yielded to the ordinary remedies, and since this time he has had no recurrence of any renal symptoms.

(*Exhibited May the 17th, 1901.*)

#### Discussion.

**Dr. Sutherland** asked whether Mr. D'Arcy Power could give any explanation of the pain from which the boy suffered. He thought the scurvy would explain the hæmaturia, but not the pain. Dr. Thompson, of Edinburgh, pointed out that people with scurvy had a large amount of uric acid, and the colic from which they suffered might be traced to the presence of that acid. Was there any hæmoglobinuria in the case?

**Dr. George Carpenter** mentioned that children with renal colic often referred the pain to the umbilicus rather than to the region of the kidney, and this boy indicated the pain proceeded from the umbilicus downwards. Cases of what might be termed simple hæmaturia in the young were not uncommon, and they generally recovered under a hospital dietary, which necessitated the consumption of a proper quantity of fresh meat and vegetables which they lacked in their home life. They were, he thought, scorbutic.

**Dr. Blumfeld** suggested that the present case might be like the one reported by Mr. Jaffrey, which was unique, probably, where there was great pain on the passage of blood. The case was under Mr. Jaffrey and a physician in St. George's Hospital. The kidney was found to be very congested, and much blood was lost at the operation, after which there were no further symptoms. It seemed strange that the present child developed the scurvy while in hospital.

**Mr. D'Arcy Power**, in reply, said he could give no explanation of the pain. Though the pain was referred to the umbilicus it was thought to be related to the right kidney, the region of which was more tense than on the other side. His own experience also was that haematuria was not uncommon in children, but the present case seemed more severe than the usual run. There was no haemoglobinuria in the case. There was a likelihood about most of the suggestions which had been made, but the boy was only a week or ten days in hospital before he developed the symptoms, but possibly the loss of blood determined them. The patient had also some enteritis, and passed mucus and blood by the bowel. He inclined to the uric acid view.

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## 58. COMPLICATIONS FOLLOWING AN OPERATION FOR THE RADICAL CURE OF A CŒCOCELE.

By D'ARCY POWER, M.B.

A CHILD with a large artificial anus in the right half of the scrotum was shown. A year ago the child was brought to the hospital, when it was twelve months old, on account of an irreducible hernia, which was said to increase in size from time to time. Mr. Power made the usual incision, and found that the hernia consisted of two parts : (1) a reducible portion of small intestine lying along the inner portion of the inguinal ring ; and (2) the vermiform appendix and part of the cæcum contained in an incomplete sac, and so firmly attached to the outer part of the inguinal canal that they could not be separated. The small intestine was returned, the ring

was closed so far as was possible, and the child made a good and speedy recovery. A month later, in an evil hour, he was persuaded to make a further attempt to reduce the irreducible portion, but the child proved to be in no condition to stand a prolonged operation, and the operation had to be abandoned. The wound became septic on the eighth day, and a faecal fistula followed, which by dint of the most devoted nursing has settled down into the present artificial anus.

(*Exhibited May the 17th, 1901.*)

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### 59. NOTES UPON THE URINE OF A NEWLY BORN INFANT.

BY GEORGE CARPENTER, M.D.

THE subject of these notes was a female infant under the care of Dr. Septimus Sunderland. The mother being unable to nurse the child, it was ordered humanised milk. It, however, did not thrive, and suffered from dyspepsia. Owing to this I was invited to see the infant in consultation with Dr. Sunderland, when we decided to place it on a suitable percentage milk mixture, which subsequently had to be discarded for a wet-nurse.

A trace of albumen was found in the infant's urine when I first examined her. An intelligent and capable monthly nurse in charge of the child said that it had always been her custom to hold infants over the *pot de chambre* at stated intervals (commencing from birth) to invite an action, and that she would experience no difficulty in the collection of the urine.

It is due to this nurse's endeavours that I am enabled to record the following observations on a subject which in this country has received little, if any, attention.

Operations were commenced on April 4th at the age of

twenty-seven days, and during the first twenty-four hours she passed  $18\frac{1}{2}$  fluid ounces of urine. For the ten following days the smallest quantity evacuated was 17 oz., the largest  $22\frac{1}{2}$  oz., the average being a trifle over  $19\frac{1}{2}$  oz. for the twenty-four hours.

On some occasions the quantity of fluid passed was slightly in excess of that taken, viz. 20 oz.

Holt, who has tabulated the results of various Continental writers, makes the quantity from 5 to 13 oz. from seven days to two months of age.

The infant held its water during the night, usually about seven hours, without mishap. The shortest period was six and a quarter hours, the longest seven and a half hours. The smallest quantity passed during this period was  $\frac{1}{2}$  oz., the largest 3 oz., the average 2 oz.

During the day urine was usually passed about every hour or hour and a half, sometimes less. The largest quantity passed at any one time was 4 oz., the smallest  $\frac{1}{2}$  oz., but a common amount was from 1 oz. to  $1\frac{1}{2}$  and 2 oz.

It was a pale fluid of slightly acid reaction and low specific gravity, the highest obtained being 1005. For the most part it was 1001 or 1002, and invariably contained a trace of albumen, as determined by the ferrocyanic test properly applied.

Holt, from the writers previously mentioned, places the specific gravity from the tenth day to the sixth month as varying between 1004 and 1010. Based on these records the specific gravity of my infant's urine was exceptionally low.

Albuminuria in healthy infants during the first days of life is not an uncommon occurrence. Cruse detected it twenty-eight times in ninety observations, and his results have since been confirmed by Martin-Ruge and Pollack.

Urea was present in trifling quantity, and varied between  $\frac{1}{4}$  and  $\frac{1}{3}$  of a grain per fluid ounce. On one occasion its presence could be identified, but it was too small an amount to make any calculation.

The largest quantity passed during the twenty-four hours was  $4\frac{1}{2}$  grs., the smallest  $2\frac{1}{2}$  grs., the average daily amount being  $3\frac{1}{2}$  grs. This was estimated by the hypobromite method in Doremus's ureometer, the solution being freshly prepared at each separate testing. To ensure against error several tests were made of each specimen of urine. The average daily quantity of urea, according to Holt, passed by infants from one to two months of age varies between 13.7 and 21.6 grs. These figures are considerably in excess of what I found.

Microscopically the urine of the newly born is said to commonly contain hyaline casts, and even granular casts.

Many careful microscopical examinations of the sediments obtained by the centrifuge from the urine were made, but yielded negative results.

The urine, therefore, of this infant differs from that of other infants recorded by reason of the large quantity of urine passed, its low specific gravity, the absence of casts, and the small amount of urea.

At the time these observations were being conducted the infant was not gaining weight, and was somewhat dyspeptic. There was no evidence of organic disease, and nothing to suggest that it had "contracted granular kidney."

(Read May the 17th, 1901.)

### Discussion.

**Dr. Sutherland** said he had not conducted such observations himself, and therefore could only refer to what was stated by the authorities. Was the child breast-fed or bottle-fed? Was Holt correct in stating that bottle-fed babies took more fluid than those fed from the breast? Did Dr. Carpenter consider that the child was quite normal in every other respect? It was important to know that if they were to have a standard.

**Dr. Cautley** suggested that when Dr. Carpenter published the paper he should state the methods by which he estimated the urea, and also the methods by which he sought for hyaline and granular casts. He thought it difficult to find casts in those cases unless they employed the centrifugal method.

**Dr. Robert Hutchison** asked whether the weight of the baby

was noted, as that would have a bearing on the proportion of urea. He generally found that the amount of urea passed by babies was under-estimated. Some years ago, when at the Children's Hospital in Great Ormond Street, Dr. Still and others made many observations, and the results tended to come out higher than those made by Holt. That would be in keeping with the present case, but he thought none of the cases were as young as Dr. Carpenter's. It was important to guard against any fallacy on the question of bottle-feeding.

**Dr. George Carpenter**, in reply, said the weight of the baby was not taken. The case occurred in private practice, and it was unfortunately not always possible to obtain what one wished outside hospital precincts. It was, however, a small, though apparently perfectly natural baby. The quantity of urea was so ridiculously small that he made several observations. Holt did not say whether the children were breast-fed, and his averages were obtained by combining the observations of various foreign observers. He (Dr. Carpenter) had quoted averages. The present baby was bottle-fed, and took twenty ounces of fluid in the twenty-four hours. In reply to Dr. Cautley's question as to casts, he made many microscopical examinations of the urine and centrifuged it on each occasion, but with no result. The urea was estimated by Doremus's ureometer and the hypobromite method, but the quantity was always quite small; once there was only a tiny bubble in the tube. The solution was freshly made for each testing, and he did not think there was any chemical error. He had been able to obtain the results he had narrated through the intelligent perseverance of the nurse.

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#### 60. LIST OF CASES ON EXHIBITION AT THE MEDICAL INSTITUTION, HOPE STREET LIVERPOOL.

**Mr. Robert Jones** (Liverpool) demonstrated cases of tendon transplantation, arthrodesis, various congenital malformations, and operations for rectification of deformities arising from spastic paraplegia and anterior poliomyelitis.

**Dr. John Logan** (Liverpool) [introduced] exhibited two cases. One was a well-marked case of sporadic cretinism.

The other was that of a child in which there was complete absence of the five lower ribs on the right side, together with a rudimentary condition of the seventh rib.

**Dr. Charles Macalister** (Liverpool) exhibited a case of bronchiectasis, one of chronic nephritis, one of cerebellar tumour, a case of paralysis of the front muscles of the leg following a chorea-like attack, and two cases which had recovered from early endocarditis. Dr. Macalister also demonstrated macroscopic and microscopic specimens of cirrhosis of the liver, illustrating his communication on "two cases of cirrhosis of the liver."

**Mr. Keith Monsarrat** (Liverpool) showed a case of sarcoma of the lower jaw, a case of pes cavus, and one of ankylosis of the shoulder, following loss of function.

**Mr. Thelwall Thomas** (Liverpool) [introduced] showed a case of spina bifida cured by operation. Three years previously the sacral canal was opened from end to end. The stump and dura mater were tightly sutured, and flaps of gluteal fascia folded over. There had been no recurrence, and there was a firm scar over the area operated upon.

**Dr. Lloyd Roberts** (Manchester) showed a child who had been brought up as a girl, but was in reality a boy with complete hypospadias.

**Dr. James Barr** (Liverpool) exhibited a case of congenital heart disease in a boy aged 12 years, with the diagnosis of mitral and tricuspid stenosis and patent foramen ovale. Also in a boy of 13 years, extensive pericardial adhesions, mitral stenosis, aortic incompetency, functional incompetency of the pulmonic and tricuspid valves owing to dilatation of their orifices, and a large nutmeg liver.

**Dr. Stopford Taylor** (Liverpool) [introduced] showed two sisters, aged 9 years and 11 years, suffering from keratosis follicularis contagiosa.

**Dr. Nathan Raw** (Liverpool) [introduced] showed six cases of mental deficiency in children :

1. A microcephalic idiot showing automatic movements, such as striking the forehead with the palms of the hands.
2. A child aged 8 years, with fair mental development, but suffering from congenital double facial paralysis.
3. A girl aged 12 years, with congenital spastic paraplegia.
4. An idiot boy with constant champing of the jaws.
5. A vicious boy, always in mischief ; and
6. Mental deficiency following an attack of tuberculous meningitis.

**Mr. George P. Newbolt** (Liverpool) [introduced] showed five cases :

1. A case of webbed fingers, arising from an extensive scald, in which a plastic operation had been done.
2. A case of osteotomy through the neck of the femur, performed for the correction of flexion and adduction deformity following old hip disease.
3. A case of double hip disease in a boy aged 7 years, to demonstrate the method of progression when both hips are ankylosed.
4. A case of double symmetrical tuberculous dactylitis affecting the first metatarsal bones, in which a gouging operation had been performed.
5. A case of deformity arising from unequal length of the lower extremities. An inch and three quarters had been resected from the elongated femur, the ends of the bone wired together. As a result, the deformity had been corrected and the child was perfectly straight.

*From 3.30 to 5 p.m., prior to the formal opening of proceedings  
of the Provincial Meeting on June the 29th, 1901.*

## 61. A CASE OF SO-CALLED FETAL RICKETS.

By HENRY ASHBY, M.D.

THERE can be very little doubt that in past times many of the cases reported as "foetal" or "intra-uterine rickets" had pathologically very little in common with true rickets. Any infant born with stunted and deformed limbs readily passed muster as being rickety.

At least one condition, viz. achondroplasia or chondrodystrophia foetalis, has been clearly differentiated and classed apart from rickets. Stoeltzner\* has recently described a case of "foetal myxoedema," which had bent and stunted bones; but his description of the case suggests an atypical case of achondroplasia rather than myxoedema.

The cases which undoubtedly have the closest resemblance to infantile rickets are those in which intra-uterine fractures occur, or the fractures take place shortly after birth; in some of these the epiphyses are enlarged and the bones bent. Comby† quotes Chaussin as having reported a case of a foetus in which there were forty-three fractures.

The following case may be taken as a fair sample of this class. The mother was a woman of forty-six years of age; the infant was her fourteenth, born at full time; her other children had been strong and healthy. The mother had suffered a good deal from ill-health during her pregnancy. There was no history and no sign of syphilis. The infant was well nourished when born; during the first fortnight it sustained five fractures, evidently from traumatism, which was insignificant. The fractures involved the right humerus and radius, and the left humerus, ulna, and femur. When examined at two weeks of age

\* Stoeltzner, W., "Fötale Myxödem und Chondrodystrophia foetalis hyperplastica," 'Jahrbuch für Kinderheilkunde,' 1899, Hefte 1 u. 2.

† J. Comby, 'Traité du Rachitisme,' deuxième édition, p. 251.

there was marked thinning of the parietal and occipital bones, especially the latter (craniotabes); the ribs were clearly less rigid than in a normal infant, as they bent inwards during inspiration, and the broad vertical grooves so common in rickets were present on each side of the sternum. The ribs were slightly beaded, but there was no enlargement of the epiphyses of the long bones. The infant was fed on cow's milk, and the fractures quickly mended under Mr. J. Collier's care; but when the infant was being examined at six weeks of age the right femur fractured. This necessitated a still longer rest on its back in its cot, and while it appeared to gain flesh and to readily repair the damage to its bones, the softened occipital bone flattened in remarkably from pressure of the back of the head on its pillow. It went out of hospital by the desire of its friends, and was not seen again till it was nine months of age. At this time it was well nourished, bright, intelligent, and had cut two teeth; there was no deformity of the chest walls, no beading of the ribs, and the occipital bone had rounded out again, so that there was no noticeable deformity.

Very similar cases to the above may be found in recent literature, among the most recent being Mason's\* and Townsend's† cases. In most of these cases there is a history of privation or of illness during the pregnancy, and the chief sign, common to all, is an imperfect calcification of the bones. They readily undergo "greenstick" fractures, or bend as in the case of the ribs on account of want of normal rigidity. The bones of the skull are in a similar condition, there is an imperfect or backward condition of ossification. In my own case there was slight beading of the ribs, but this slight beading may be seen in many newly born infants, and it is doubtful if it can be looked upon as pathological. Ossification of the ribs is proceeding with all haste in many infants at least, during the last month or so of intra-uterine life, in order to prepare

\* Mason, 'Arch. Pediatrics,' xi, p. 670, 1894.

† Townsend, C. W., 'Arch. Pediatrics,' xi, 761, 1894.

for the satisfactory performance of the respiratory act after birth.

What is the nature of these cases? They can hardly be classed with osteo-malacia, as in this disease the patient goes from bad to worse; and though a case of so-called osteo-malacia foetale has been reported, it seems a very doubtful one. Osteo-malacia seems sometimes to occur in later childhood. Neither can these cases be classed with fragilitas ossium, for in this disease there is simply a fragility or brittleness with no bending, and the subsequent history of my case is unlike the history one would expect in a case of fragilitas. There is no evidence to connect them with syphilis; the latter produces an osteochondritis or epiphysitis, but not as far as I am aware a softening or fragility of bone.

In these cases of so-called foetal rickets there seems to be a close connection between the health of the mother during pregnancy and the condition of the foetus at birth. In many of the cases reported the mother has suffered from privation, she has been badly fed, or there is a history of an illness. In connection with this last it is interesting to note that Charrin and Gley\* claim to have produced congenital rickets in a rabbit by injecting the parents with the toxines of diphtheria and "blue pus."

It is clear in these cases there has been an interference with the formation of true bone during foetal life, but there has been no general condition of malnutrition, as the infants are often at least well nourished.

Are they cases of true rickets, such as is seen in an infant of six or nine months, only modified by place and circumstance? Or are they examples of the "pseudorickets" or "osteoporosis" produced by feeding young animals on improper food with a shortage of lime salts? Thus Stoeltzner† fed a puppy on horseflesh, bacon, and

\* Charrin and Gley, 'Compt.-rend. Soc. de Biol.', iii, 220, 1896 (quoted by J. W. Ballantyne).

† Stoeltzner, W., 'Beiträge zur Pathologie des Knochenwachsthums,' p. 18.

distilled water, with the result that while the animal grew and increased in weight, the bones bent and the epiphyses enlarged. At first sight the changes in the bones closely resembled those seen in typical cases of rickets. There was a high degree of sponginess or porousness. A careful microscopical examination of stained preparations showed a marked difference between this osteoporosis and true rickets. Speaking generally, in rickets there is a very extensive preparation for ossification, a rich formation of osteoid tissue, which with no scarcity of lime salts remains uncalcified; while in osteoporosis but slight preparation for ossification takes place,—less indeed than normal; and, in spite of a scarcity of lime salts, the osteoid tissue is calcified. In osteoporosis, in opposition to rickets, there is calcification of the cartilage matrix.

It seems to me that these cases of so-called foetal rickets resemble osteoporosis rather than true rickets, but careful examination of the bones pathologically by competent observers and by modern methods is wanted before the question can be finally settled.

*(Read June the 29th, 1901.)*

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## 62. TUBERCULOSIS OF THE CHOROID.

By GEORGE CARPENTER, M.D.,  
AND  
SYDNEY STEPHENSON, C.M.

EVERY practical physician is aware that tubercle may now and then be found in the choroid of patients suffering from acute miliary tuberculosis. The diagnostic importance of these small bodies has been touched upon by all systematic writers. There is, however, no general agreement either as to the ophthalmoscopic forms which

they may assume or as to the precise conditions under which they may occur. These omissions are doubtless due, first, to the technical difficulties attending an ophthalmoscopic examination of a young child with such a serious disorder as tuberculous meningitis; and secondly, to the fact that a single observer, be he physician or be he ophthalmic surgeon, is scarcely likely to come across many cases of choroidal tubercle. It is our present intention to record our personal experience of tubercle of the choroid, and in doing so we shall purposely limit our remarks to what we have ourselves observed.

The following observations are based upon the study of forty-nine cases of tubercle of the choroid. They may be grouped as they were met with clinically in (1) acute miliary tuberculosis and tuberculous meningitis; (2) chronic tuberculosis, medical and surgical; and (3) obsolescent tuberculosis.

#### (1) ACUTE MILIARY TUBERCULOSIS AND TUBERCULOUS MENINGITIS.

Out of forty-two\* unselected cases of these diseases which we examined with the ophthalmoscope we found twenty-one with tubercles of the choroid, or exactly 50 per cent. In thirteen of these cases tubercle was recognised in one eye only, and in both eyes in the remaining eight cases. This gives a total of twenty-nine eyes (thirteen single and eight bilateral) in which the changes of tuberculosis were detected. In eighteen of the eyes the lesion was solitary in the sense that it consisted of a single tuberculous deposit. In the remaining eleven eyes the number of separate lesions ranged from as few as two to as many as twelve; but we desire to emphasise the

\* Of thirty-six cases of general tuberculosis, all except six of which were verified by necropsy, twenty-six had head symptoms. There were six cases of tuberculous meningitis, four of which were verified at the post-mortem examination. Of the total number of cases (forty-two) sixteen developed optic papillitis.



#### DESCRIPTION OF PLATE VII.

Illustrating Dr. GEORGE CARPENTER and Mr. SYDNEY STEPHEN-  
SON's paper on Tuberculosis of the Choroid.

FIG. 1.—Jane R—, aged 3 years, seen in 1889 with tuberculous meningitis and died the same day. General miliary tuberculosis was found at the autopsy. The choroidal tubercle was caseating in the centre; tubercle bacilli were demonstrated in it. R. eye. (See page 171.)

FIG. 2.—Fred. P—, aged 2 years, seen March, 1896. L. eye. Cerebral symptoms; spleen enlarged. Temp. 103° F. Small fawn-coloured tubercle seen in the right eye near the optic papilla.



FIG. 1. Tubercle of Choroid.



FIG. 2. Tubercles of Choroid.



fact that the common number was merely two or three. The tubercles usually took the form of round, oval, or reniform areas, of a fawn, grey, or paper-white colour. Their edges, which are perhaps best described as "moth-eaten" in appearance, were generally marked by a narrow zone of darker colour, due (as our microscopical specimens show) to local aggregation and proliferation of the retinal pigmented epithelium. The amount of pigmentation appeared to bear some relationship to the size of the tubercles, since it was generally absent from the smaller nodules, so that the latter could not well be distinguished by their ophthalmoscopic characters from any other choroidal exudation, such as may be met with in syphilis, acquired or inherited. Flecks, dots, or rings of pigment, doubtless of retinal origin, were occasionally to be seen upon the surface of the nodule itself. One of the tubercles was bounded by a pigmented ring with a halo outside it of scattered granules of dark pigment on a grey ground. It is important to note, however, that the tuberculous nodules were never framed, as it were, by a thick border of pigment, such as is commonly present in the lesions of an ordinary disseminated choroiditis from syphilis. In one case we found a pink streak running in the long axis of the tubercle, and in another a spot of similar colour in the centre of the little mass. These we take to be dilated choroidal vessels, such as we have found (stuffed with red corpuscles) to be present in some of our microscopical specimens. In three cases the tubercle assumed the rather unusual form of a small, oval, granular, pigmented mass situated near the optic disc. In one instance a paper-white tubercle was surrounded by a pale red ring, presumably due to congestion of the neighbouring choroid (Fig. 1). The centre of some of the tubercles was marked by a tiny white, shimmering dot, difficult to describe exactly in words. The retinal vessels when in immediate relationship to the tubercle (as they often were) passed over the nodule without loss of definition, as would be expected from the position of the lesion—namely,

in the parenchyma of the choroid coat (Figs. 2 and 3). In one case only was the slightest alteration noted in the neighbouring retinal vessels, which presented an ill-defined muddy appearance, possibly due to localised oedema of the retina. In eyes where the choroidal vessels were unusually distinct these were seen to terminate abruptly at the edge of the tuberculous lesion. Judging by the position of the retinal vessels, the tubercles were seldom much raised above the level of the retina. With regard to the size, the tubercles ranged from a fraction of a millimetre to three millimetres in diameter, and it was exceptional for them to equal the optic disc in magnitude. Practically speaking, they were found only in the immediate vicinity of the optic disc and the macula lutea,—that is to say, in the so-called “central region” of the fundus oculi. With one exception a peripheral distribution was noted only in cases where the tubercles were numerous. In a few instances the nodules lay exactly at the macula lutea. Thus, a small but definite tubercle was found in that position in one eye of a child aged five years, whose second eye showed several small growths disseminated through the choroid. The patient died from acute miliary tuberculosis ten days after the discovery of the choroidal lesion, and the nature of the ocular growth was confirmed both pathologically and bacteriologically. In another child, aged five years, a tubercle was found at each macula lutea. A third case was so unusual as to merit a few words of separate mention. A rickety boy, aged two years and five months, suffered from whooping-cough, bronchitis, and an enlarged spleen (Fig. 4). In the macula lutea of the left eye was a raised quadrangular mass about eight times the size of the optic disc, of a dirty grey colour and with an ill-defined margin. The retinal pigment was distributed irregularly over its surface. Those retinal vessels which crossed the area were blurred, owing, we presume, to oedema of the retina, which had been detached by the underlying tubercle. The child succumbed to general tuberculosis six weeks after the eyes



#### DESCRIPTION OF PLATE VIII.

Illustrating Dr. GEORGE CARPENTER and Mr. SYDNEY STEPHENSON's paper on Tuberculosis of the Choroid.

FIG. 3.—E. S—, a male aged  $6\frac{1}{2}$  years, seen June, 1889. Apparently suffering from general tuberculosis; spleen enlarged. Died subsequently under the care of Dr. Archer Wood with lung symptoms. R. eye. Two fawn-coloured tubercles were detected in the left eye.

FIG. 4.—George G—, aged  $2\frac{5}{12}$  years, seen January 23rd, 1890. He was rickety, and had been recently suffering from bronchitis and whooping-cough, and his spleen was enlarged. Died March 7th, 1890. Tuberculous meningitis and general miliary tuberculosis were found at the autopsy, and a large grey miliary tubercle at the yellow-spot region of the left eye. (See page 172.)



FIG. 3. Tubercles of Choroid.



FIG. 4. Tubercle of Choroid.



were examined, and at the necropsy a large grey tubercle was found at the macula lutea.

There is an impression that tubercles of the choroid, visible with the ophthalmoscope, may appear in the course of a few days or hours. The only evidence which we possess on this point was furnished by a child, aged five years, with coarctation of the aorta, whose fundus oculi was examined with negative results on June the 10th, 1895. Nine days later, however, a further investigation revealed the presence of three small tubercles near the optic disc of the right eye. A statement which apparently rests on the authority of Cohnheim has been made that choroidal changes are commoner in tubercle without than with meningitis. Our present figures lend no support to this generalisation, as may be seen on referring to the foot-note on page 170. Is tubercle of the choroid a late symptom? We find that the period elapsing between discovery of the ocular changes and death ranged in fourteen fatal cases from one to forty-three days. We conclude, therefore, that it is not necessarily a late symptom of general tuberculosis. The following case, indeed, shows that choroidal tubercle may be an early sign. A boy aged three years, with cervical caries, was examined on April the 24th, 1890, and was found to have a solitary tubercle near the yellow spot of the right eye. He developed whooping-cough in the early part of 1891, and died from general tuberculosis (confirmed post mortem) at the end of April in the same year.

From the foregoing remarks it will be obvious that in acute miliary tuberculosis and tuberculous meningitis choroidal tubercle may assume several different forms. It is important to remember that in a majority of the cases the lesion in the choroid is small, single, and limited to one eye. This emphasises the somewhat obvious fact that both eyes must, as a matter of routine, be examined before the absence of choroidal tubercle can be affirmed.\*

\* We may add that, in our experience, the best way is—first, to scrutinise the fundus oculi by the indirect method for the purpose of discovering the lesions, and then, having found them, to work out their exact details by the

Our figures prove that choroidal changes are frequently present in acute tuberculosis. Indeed, in our opinion they form perhaps the most trustworthy sign of that disorder, the diagnosis of which, as we all recognise, is often most obscure. Attention is sometimes drawn to a discrepancy between the alleged infrequency of the ophthalmoscopic discoveries on the one hand, and the frequency of the pathological findings on the other. Admitting the truth of this view, which, in the light of our present figures, we do with some little hesitation, there are several points to be borne in mind. Tubercl<sup>e</sup>, although present, may lie in the anterior portions of the choroid coat beyond the range of the ophthalmoscope, as we have ourselves found. If the nodule is not large enough to cause disturbance of the overlying retinal pigmented epithelium, it can scarcely be visible with the ophthalmoscope, although it may be found on post-mortem inspection when the retina is removed. It seems likely that the rapid appearance of fresh tubercles mentioned by many writers is to be explained by an acute disintegration of the pigmented epithelium rather than by a presumed unusually sudden appearance and rapid growth of the nodules themselves. Then there remains, last but not least, the personal factor, which is certainly not without influence when it comes to examining the eyes of a young and troublesome child with the ophthalmoscope. In short, we repeat that careful ophthalmoscopic examination will show tubercle of the choroid to be quite common in acute miliary tuberculosis, since it was present in 50 per cent. of our cases.

#### (2) CHRONIC TUBERCULOSIS, MEDICAL AND SURGICAL.

We have examined with the ophthalmoscope 119 cases of chronic tuberculosis in children whose ages ranged from eight months to sixteen years. They suffered from such direct method. A pupil dilated with euphthalmine or some other mydriatic agent is almost indispensable for the average observer, and a great help even to an expert.



#### DESCRIPTION OF PLATE IX.

Illustrating Dr. GEORGE CARPENTER and Mr. SYDNEY STEPHENSON's paper on Tuberculosis of the Choroid.

FIG. 5.—Alfred W—, aged 4 years, seen October 17th, 1898. Sought advice for difficulty of walking and for weakness of the right side. Optic atrophy and a choroidal tubercle as seen in Fig. 5 were found. Subsequently he developed convulsions and died. A tuberculous cerebral tumour was found in the upper two left frontal convolutions. (See page 176.)

FIG. 6.—Addy B—, aged 23 years, seen 1901. Obsolescent tubercle of the choroid. (For notes of her case see pages 177, 178.)



FIG. 5. Tubercle of Choroid.

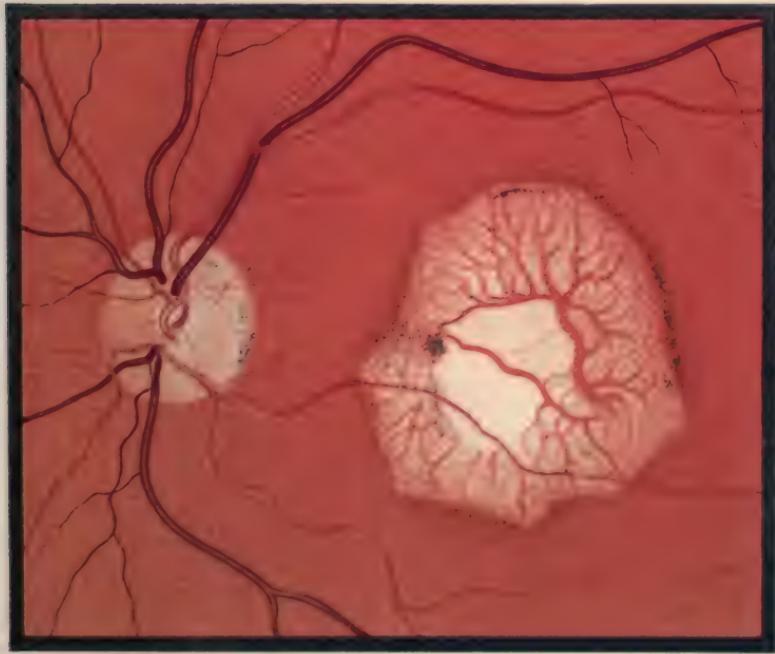


FIG. 6. Obsolescent Tubercle of Choroid.



various affections as tuberculous joints, chronic tuberculous adenitis, spinal caries, chronic tuberculous cerebral tumour (two cases), and lupus. Amongst them we found choroidal changes in no fewer than eleven, or 9.24 per cent., of which three were verified post mortem. The choroidal lesions fell into four groups—viz. (i) the solitary, (ii) the multiple, (iii) the disseminated, and (iv) the diffused. As the solitary and the multiple closely resemble those already described in acute tuberculosis they need not be further particularised. The case of disseminated tubercle of the choroid occurred in a stunted lad, aged twelve years, with extensive scrofuloderma and chronically enlarged cervical glands. He showed absolutely no signs of hereditary syphilis. Both eyes presented a condition indistinguishable from choroiditis disseminata syphilitica. The evidence, however, pointed clearly in the direction of a tuberculous and not a specific origin for the choroidal mischief. The case of diffused tubercle was in some respects even more remarkable. A boy, aged six years and seven months, came under our notice on April the 21st, 1901. His right eye had been "blind" for about eighteen months, and he had suffered from tuberculous arthritis for about eight months. There was no family history of phthisis, but a lodger with that disease had lived in his parents' house before the onset of the eye trouble. We found the lad suffering from tuberculous arthritis of the right knee and slight chronic enlargement of the cervical glands. There was no evidence whatever of syphilis. The fundus of the right eye manifested extensive changes (Fig. 8). There were visible large areas of detached retina, probably caused by gross masses of tubercle in the choroid. Glistening white smaller patches (which resembled roughly those of albuminuric retinitis) possibly represented tubercle of the deeper layers of the retina. In rare cases diffused tubercle may assume even greater dimensions. A youth, aged sixteen years, gave a family history of phthisis on his mother's side. He himself suffered from a cough and presented signs of tubercle

at one apex. His right eye was blind and painful. The cornea was diffusely hazy. The tension of the globe was raised. No reflex could be obtained from the fundus. The eye was excised as probably containing a tumour of tuberculous nature. Upon examination the vitreous chamber was found to be filled with a greyish solid exudation, with a lenticular-shaped haemorrhage at one part. Microscopically the exudation was found to consist of caseous material staining very imperfectly. Bacilli were not looked for. Such a case as this in a child under three years of age would be difficult or impossible to distinguish from glioma of the retina.

Finally, we quote one case to show the diagnostic value which may attach to the discovery of these choroidal changes. A boy, aged four years, was brought to the hospital with paresis of his right side, and especially of his right leg. There was double optic atrophy, and in one eye a small paper-white tubercle was found close to the optic disc (Fig. 5). The provisional diagnosis of a tuberculous cerebral tumour was made. The child soon afterwards developed Jacksonian epileptiform convulsions, became comatose, and died from exhaustion. A large tuberculous tumour was found to occupy the upper two frontal convolutions on the left side of the brain, and to press upon the ascending frontal convolution. We venture to think that a positive diagnosis could not have been reached in this case had a choroidal tubercle not been discovered.

### (3) OBSOLESCENT TUBERCLE.

In examining eyes systematically one sometimes comes across unsuspected changes of a coarse character which are far more likely to be due to quiescent tubercle than to anything else. In the absence of a pathological examination it is, of course, impossible to be dogmatic on the point, but the family history and the physical examination of the cases render such an explanation something more than merely probable. We have notes of sixteen such





#### DESCRIPTION OF PLATE X.

Illustrating Dr. GEORGE CARPENTER and Mr. SYDNEY STEPHEN-  
SON's paper on Tuberculosis of the Choroid.

FIG. 7.—A. P—, a female aged 51 years, seen in 1901. Obsolescent tubercle of the choroid in the left eye with satellite tubercles. (For notes of case see page 177.)

FIG. 8.—Robert C—, aged  $6\frac{7}{12}$  years, seen in 1901. Diffused tubercle of the choroid and ? retina. (For notes of the case see page 175.)



FIG. 7. Obsolescent Tubercle of Choroid and Satellite Tubercles.

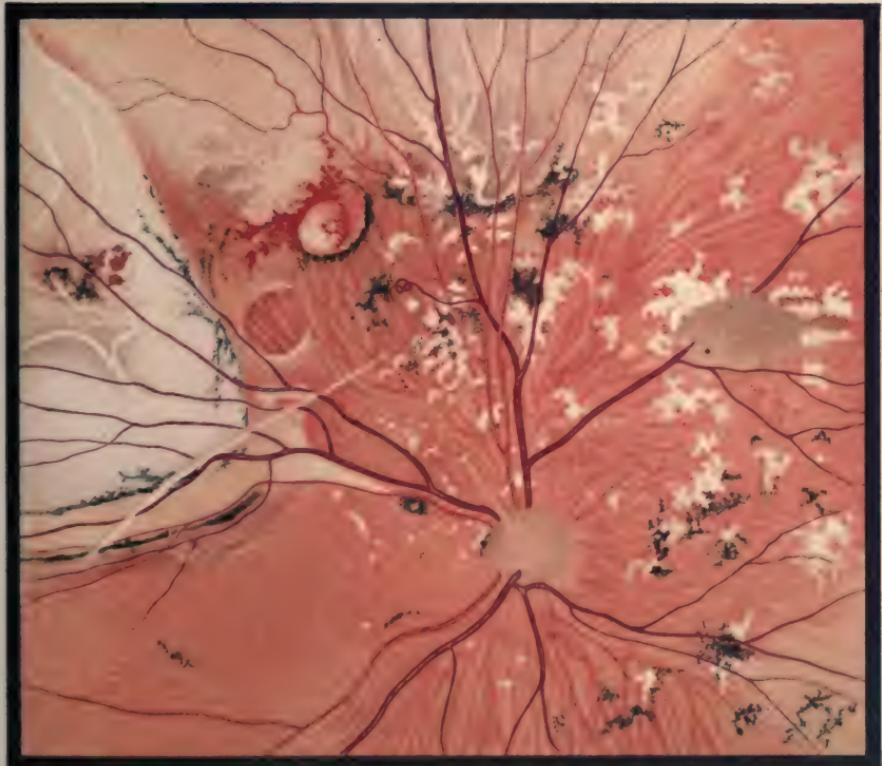


FIG. 8. Diffused Tubercle of Choroid and (?) Retina.



cases, of which one or two of the more typical may be briefly cited. In the first case which we quote a boy, four years of age, had chronically enlarged glands, a thickened upper lip, and running and excoriated nostrils. There was a family history of phthisis. A quadrangular area, somewhat larger than the optic disc, was present in the macular region of the left eye. Its colour was lighter than that of the surrounding fundus. The centre of the figure was marked by a small mass of pigment, and this was encircled at some distance by a pigmentary ring, the intervening area having a greenish-grey hue. The periphery of the patch showed here and there slight accumulations of pigment. Several retinal vessels crossed the patch without being in the least involved. The only change observed during the six years that the lad remained under observation was a gradual increase in the density of the central pigmented ring. In another case a boy, aged four years, presented in the central region of the left fundus oculi an oval patch nearly as large as the optic disc. Its appearance was something like that of the case last-mentioned. The child had enlarged cervical glands, but unfortunately his family history was unknown. In a striking case we met with the patient was a woman, aged fifty-one years, who gave a strong family history of phthisis. She had herself been treated at the Brompton Hospital for her chest some thirty years before coming under our notice. Lying near the inner side of the left optic disc was a circular area, half as large again as the optic papilla. It showed exposed choroidal vessels and was bordered by pigment (Fig. 7). A number of tiny fawn-coloured spots—all, with one exception, devoid of pigment—were scattered about the fundus near the main lesion and the optic disc, and doubtless these represented satellite tubercles which had also become quiescent. A fine film was present in the vitreous humour, but sight was normal. In another instance, a fairly-nourished woman of twenty-three years of age, with some trifling enlargements of her accessible lymphatic glands and a strong

family history of phthisis, had experienced an abdominal attack some five years previous to coming under our notice. We found that she had thickening along her ascending colon, probably resulting from an attack of tuberculous peritonitis, and there was also a floating kidney on the right side. When she was nineteen years old she could see perfectly with her left eye. There is no doubt about this statement. Two years ago she experienced sudden pain in the left eye, and thought it had been struck by a foreign body. She then noticed she could not see with it. In the macular region of the left eye was a large patch, some four times the size of the optic disc, consisting in part of a paper-white area and in part of exposed choroidal vessels, which was a few shades darker; a retinal vessel crossed the patch (Fig. 6). There was a slight increase of retinal pigment at the margin in one or two places, and some trifling pigmentary disturbance in the patch. Near the margin of the optic disc on the same side were two tiny fawn-coloured spots, with a slight intensification of the retinal pigment round them.

We have notes of thirteen other cases, but we will merely say that the essential ophthalmoscopic characters of obsolescent tubercles in the choroid appear to us to be (1) their central position in the fundus oculi; (2) their large size and presence in one eye alone; (3) their characters—namely, a central atrophic area enclosed by a pigmented figure, and often surrounded by a zone of altered choroid; and (4) the fact that they are sometimes associated with tiny atrophic spots in their vicinity, doubtless representing their former satellites. That they may assist diagnosis in some doubtful cases is shown by the case of a girl, aged  $10\frac{1}{2}$  years, who was seen on July 27th, 1886, with the history that she was healthy until two years of age, when she developed convulsions which were succeeded by hemiplegia. Her father had died from phthisis. She had been treated at a children's hospital for "infantile paralysis." Upon examination she was found to have left hemiplegia and increased

patellar and elbow jerks, but no facial paralysis. In her left eye was a patch of what appeared to be obsolescent tubercle of the choroid. This latter observation threw some light upon the nature of the lesion, and rendered it probable that the hemiplegia was due to a localised tuberculous growth in the brain.

#### SUMMARY.

1. Tubercle of the choroid may be met with in any form of tuberculosis, whether acute, chronic, or obsolescent.
2. It is common in acute miliary tuberculosis and tuberculous meningitis, since it was present in 50 per cent. of our cases. As a rule the lesion was of small size, solitary, and limited to a single eye.
3. It is far more frequent in chronic tuberculosis than is generally supposed. It was present in 9·24 per cent. of our cases. The tubercle in this form of disease may be single, multiple, disseminated, or diffused. In very rare instances it may attain great dimensions, and eventually may even perforate the tunics of the eyeball.
4. It is present in a certain number of cases of quiescent tuberculosis. It then generally takes the form of a large, more or less pigmented area, situated in or about the central region of the fundus oculi, with or without satellites.

*(Read June the 29th, 1901.)*

#### Discussion.

**Dr. Sansom** heartily thanked the authors of the paper for one of the most practical and valuable contributions he had ever heard in his life. It smoothed in a singular manner some of his own difficulties. Several years ago he was called in consultation to a case, the child of a practitioner in a suburb of London, a girl thirteen years of age. He found her unconscious, with dilated pupils, and signs which seemed to point to tuberculous meningitis. He examined the fundi with the ophthalmoscope—as he hoped was the routine practice of all,—and said to the practitioner, “There are tubercles in the choroid.” That was regarded as ending the matter. The patches were small, two or three in each eye, but he could not have the slightest doubt about their nature. Accordingly he gave a most unfavourable prognosis, especially as the breathing was becoming stertorous. He recommended two or three grains of calomel

that night, which might be repeated each night so long as the child lived; and if it could swallow it could be given iodide of potassium, carefully regulating the dose. Twelve months afterwards the child was alive and had recovered, which was satisfactory, but he never saw her again, probably because of his bad prognosis. He had not had the opportunities for observation possessed by the authors of the paper, but from what they said he could not doubt that the child he had referred to made a good recovery. He had no doubt now that there was such a thing as obsolescence. Altogether it was a very pleasant and cheering prospect, and evidently one should not condemn a case even though there were apparent signs of tuberculous meningitis. This paper showed how useful the Society was in bringing together records such as should be lasting and classical, even though further inquiry should be desirable. The paper would do credit to any volume of Reports which might be issued, and would show that the Society had a *raison d'être*, and that it was likely to do a great deal of good in the future.

**Dr. Barnett Warrington** (Liverpool) [introduced] asked whether the authors could give any information about the times at which the tubercles developed in acute meningitis. As a student, one was taught that if tubercle of the choroid occurred in the disease it was only observed in the last stage, and that therefore it was merely an academic point which was not of practical importance. He had not yet been fortunate enough to see tubercle of the choroid.

**Dr. Ashby** (Manchester) asked that the numerous and excellent water-colour drawings of the fundi exhibited in connection with the paper should be reproduced in the 'Reports.'

**Dr. George Carpenter**, in reply to Dr. Warrington, said in the first group—that of acute tuberculosis or tuberculous meningitis—the tubercles were discovered in from one day to six weeks prior to death. In the second group, a tubercle in one instance was discovered in a case of spinal caries. It was kept under observation for exactly a year, and then the child succumbed to tuberculous meningitis. The choroidal tubercle of that case was fawn-coloured, and had a pigmented ring upon it. While under observation the tubercle grew somewhat, and the ring gave place to specks of pigment. Dr. Sansom's case was one of great interest, and showed it was not wise to give a grave prognosis because tubercle was present in the choroid. It was a remarkable and valuable corroboration of his own and Mr. Sydney Stephenson's views on the subject. The third group showed still further that there were such things as obsolescent choroidal tubercles, which had been active at one period of their life-history, but had subsequently become extinct, with or without damage to the sight, according to their situation. If such should be

detected accidentally in the absence of obvious tuberculous lesions elsewhere, they should be taken as a warning of the liability of that individual to tuberculous infection, and of the necessity therefore to always maintain the general health at a high level.

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### 63. NOTE ON A CASE OF SYPHILIS TRANSMITTED TO THE THIRD GENERATION.

By D. M. HUTTON, M.D.

THE question of the transmission of syphilis to the third generation has interested physicians in all ages—possibly even from the time of Moses. Of late years the problem has received some considerable amount of attention, and opinion on the point at issue has been much divided.

At the present day (and especially, perhaps, in this country) the balance of opinion represented by Mr. Jonathan Hutchinson's views weighs decidedly against the theory of such transmission.

On the Continent, Fournier and others are satisfied that not only is this transmission possible, but that it has been proved to occur.

The matter is still in doubt, and the observations are few in number. It is our duty to make careful records of as large a number of cases as possible, that we may reduce to a minimum the possibility of error.

I venture to present the following case to the Society's consideration, and I am the more encouraged to do this seeing that there are here fewer possibilities of error than in many, perhaps in the majority of recorded instances.

The grandfather of the patient married thirty years ago. At that time he showed a certificate from his doctor stating that he had contracted syphilis, but was cured and fit to marry. He again developed secondary eruptions within two months of his wedding. All his

life he suffered from the disease, and, I believe, eventually died of it.

His wife was healthy, and continued to be so. There were six pregnancies, the first an abortion at three months. The second child, born at full time, was the mother of the patient. She suffered from very extensive syphilitic psoriasis, which relapsed whenever antisyphilitic treatment was suspended, and which was never completely cured until she reached the age of sixteen years. She married at twenty-two years of age, and her only child was born three years later.

This child suffered from and died of congenital syphilis. A roseolous rash developed about the buttocks within two weeks of its birth. The child rapidly became a typical picture of congenital syphilis, snuffing, feeble, wizened and aged in appearance, with mucous patches about the anus. It died, in spite of mercurial treatment, when five weeks old.

*To sum up, then,* we know it will ever be impossible to demonstrate *in an individual case* that syphilis has been transmitted to the third generation, for at no time can we completely eliminate the possibility of parental acquired syphilis in the second generation. Nor can we answer those who suggest that the term *husband* is not precisely synonymous with the term *father*.

Finally, the value of the evidence rests upon the extent of the physician's knowledge, and upon his common-sense application thereof.

In the case I have read there is no doubt about the parentage of the infant. The father, closely cross-examined, admitted no possibility of contagion, nor could any mark of syphilis be found upon him. His character, and my knowledge of it, are such as to make his statement credible.

The possibility of syphilis acquired by the mother is again, in my judgment and in my knowledge of her, as inconceivable as the possibility of her adultery with an infected man.

There is no doubt of the grandfather's syphilis; he produced a medical certificate to that effect.

The mother (herself an eldest child) suffered from syphilitic psoriasis until the age of sixteen years, six years before her marriage. That the psoriasis was syphilitic was agreed to by her medical attendants, and by consulting physicians. The three doctors who saw the infant independently agreed to the typical picture of syphilitic marasmus presented by the child.

In my judgment, and in that of other medical men with whom I have been associated in the case, and whose names I regret I have not permission to mention, the statement of the husband is fully to be relied on; and, in my judgment, by far the most probable explanation of the facts is that the syphilis was transmitted from the grandfather to the third generation.

*(Read June the 29th, 1901.)*

### Discussion.

**Dr. Ashby** (Manchester) thought the only weak point was that the infant aged only two weeks should die with a so-called syphilitic rash. He thought it fell to the lot of most of them to see an infant of a week or two old with a rash and snuffling almost exactly resembling syphilis, and yet one was convinced the cases were not syphilitic. Two or three weeks ago a medical friend of his asked him to see his baby, two weeks old. The father was asked if he had thought of syphilis, and he replied that he and another medical friend had agreed that if they had seen the child outside they would have regarded it as syphilitic; but neither he nor his wife had ever had syphilis. He had seen infants three, four, and five months old with some septic erythema at the umbilicus, or spreading from the rectum, or nose, with snuffles, having a very syphilitic look, in the families of clergymen and doctor friends, who were telling the truth when they said they had never had syphilis. Possibly in Dr. Hutton's case the rash was simply septic.

**Dr. Cautley** asked whether there was any other evidence—ante-mortem or post-mortem—of syphilis. It seemed unusual that a baby should die at a few weeks old unless there was some marked evidence of the syphilitic affection, such as syphilitic disease of the liver or syphilitic enlargement of the spleen. He would like to hear from Dr. Hutton whether he found any such

evidence during life. Unless there were such evidence he would feel strongly with Dr. Ashby that the child was simply marasmic, and that it was not a case of congenital syphilis.

**Dr. Sutherland** asked whether the only sign of syphilis possessed by the mother was the psoriasis, because he could not accept that as being absolutely pathognomonic of syphilis.

**Dr. D. M. Hutton** (Southport), in reply, said no post-mortem on the case was made. He regretted he could give no further evidence of syphilis than he had narrated. He could not speak as to the other children of the mother. He thought it reasonable to suppose that the psoriasis was syphilitic. An infinitely more probable explanation was that the grandfather produced a certificate saying he had had syphilis and was cured, but afterwards became notorious as a man who had had syphilis, and his child developed psoriasis. Even if the mother was not syphilitic it did not prove that the disease was not transmitted to the third generation, though that would be a much more extraordinary story than that it was handed on through a congenitally syphilitic mother. The whole question was one of possibilities and probabilities and of individual judgment. As he had said, he could not demonstrate that it was a case of transmission, but they would never be able to find out the truth until they placed such cases on record.

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#### 64. ON THE TREATMENT OF ENDOCARDITIS IN ACUTE RHEUMATISM AND CHOREA.

BY RICHARD CATON, M.D.

(INTRODUCED.)

FEELING strongly the great importance of the sequelæ which frequently follow valvulitis in attacks of acute rheumatism and chorea, alike in children and in adults, the author began some twenty years ago to search for measures of prevention. Sixteen years ago he decided upon a definite method, which has been followed ever since. The clinical material to which this method has been applied consisted in about 500 cases of acute rheumatism and chorea.

The former were treated in the ordinary manner by

salicylates, cholagogues, and a light diet ; the limbs and trunk were clothed in flannel, and the patient kept in bed for some weeks. Any lingering pains were dissipated by small blisters locally. The latter (the chorea cases) were treated with arsenic, and kept at rest in bed. The proportion of cases of valvulitis was under 20 per cent. The following signs were considered to indicate the occurrence of valvulitis :—softening and dulling of the valvular sound, proceeding to the development of a *bruit*, usually at the mitral valve, and systolic in time, but sometimes presystolic, heard in the axilla, and followed by accentuation of the second pulmonary sound. Infrequently a diastolic murmur at the aortic cartilage occurred. Treatment consisted in the three following measures :—First, and most important, absolute rest in bed for several weeks ; second, the application of a series of blisters, less than a florin in size, one at a time, in the region of the first four dorsal nerves in front ; and third, sodium iodide, in appropriate doses, is given thrice daily. After each blister a small poultice is applied. The object of the rest in bed is, of course, to protect the softened and weakened valve-cusps from pressure, and to slow the heart's action. The object of the blistering is to stimulate the trophic nerves of the heart through the afferent filaments of its own specially related skin area, just as the reparative process in a joint is unquestionably stimulated by blistering the adjacent skin. The purpose of the iodide is to help absorption of the (at first) imperfectly organised inflammatory products in the cusps and endocardium. This method of treatment is of service only if it be commenced early, say within the first two or three weeks. In cases of long standing it is useless.

Carefully setting aside all cases of slight transitory *bruit*, all which appeared to be hæmic in origin, and any that seemed to be probably due to a weakened and dilated ventricle, there remained ninety-two cases of genuine endocarditis for treatment.

The total was divisible into two groups :—Firstly,

those which on admission into hospital had a *bruit* of uncertain duration, but probably recent. These numbered sixty-one. Of these forty-one left hospital with hearts apparently sound, while twenty were believed to have valvular disease. Secondly, those in whom the *bruit* and other signs of valvular disease came on in hospital, or in whom the onset had been recently observed by the practitioner who sent in the case. These numbered thirty-one; of these twenty-eight left the hospital with an apparently sound heart, and three with valvular disease. As far as practicable the apparently cured cases are subsequently kept under observation for months, or years. One unsatisfactory feature should be noted: if in a case which has apparently been cured rheumatism recurs at an early date, the endocardial symptoms usually recur also; and though endocarditis is sometimes again removed by protracted treatment, it frequently persists.

The author insisted strongly on the importance of frequent examinations of the heart in all febrile affections in children, although no rheumatic pains be present, and more particularly in those cases in which complaints are made of the throat. He believed that the treatment described, if applied early, would in the great majority of cases arrest commencing valvular disease and prevent much subsequent suffering. He had met with very little difficulty or complaint in respect of the small blisters employed. The name of a blister sometimes alarmed the patient, or his parents, but its actual application, if properly managed, and if it were small enough, was in almost every instance found to occasion only a trivial amount of discomfort.      (Read June the 29th, 1901.)

### Discussion.

**Dr. Carter** (Liverpool) [introduced] said, as he had benefited very much by the suggestions thrown out in that room by Dr. Caton many years ago, he would be sorry to let the present contribution pass without saying a word or two as to the great utility, as

he believed, of the practice he had laid down. Brought up in the superstition—as some people regarded it—of the value of blistering, and confirmed in it by subsequent experience, he was led to accept Dr. Caton's proposals and apply them in his practice. Without entering into details, he wished to bear general testimony to the great utility of the method. He was sure it was a good one, and it was not alone applicable to children. He yesterday saw an adult who was, under his direction, carrying out the plan, though not in every detail, and with very beneficial results. As the patient was an adult he chose as the counter-irritant a strong ointment—the iodide of mercury. That, with short intervals between, had been carried on without the slightest attempt at symptoms coming on, and was followed by strict rest in bed, antirheumatics, and the application of counter-irritation, until instead of a crippled condition, which seemed inevitable, the patient preserved the power to carry on a good practice with very little difficulty at all. That case was an expression of testimony more valuable than the ordinary, as it strikingly corroborated in an adult what Dr. Caton had said. He invariably treated children in that way, and the results were so encouraging that he thought all medical men might safely carry it out. He was personally very much indebted to Dr. Caton for the clear and definite way in which he had laid down the method of procedure.

**Dr. Sansom** said he was very sorry, but he felt it to be his duty to put in a dose of therapeutic scepticism, though he envied Dr. Caton his therapeutic enthusiasm. His (Dr. Sansom's) own therapeutic enthusiasm on that subject was a thing of the past, and if asked his opinion as to the value of the treatment enunciated by Dr. Caton he feared he would say that blisters were a little less than worthless for what the author of the paper called endocarditis. If anyone present would tell him what that was he would be delighted, because with him the ideas concerning endocarditis were in a state of fog. He had lived a long while in the atmosphere of treatment, and had seen it all. His old friend Professor Budd, whose house physician he (Dr. Sansom) was, introduced the blister treatment. He put blisters above the joint in rheumatism, and supported that treatment by an immense array of conclusive evidence. That lasted a little while, but where was the practice of blistering joints now as a recognised procedure? No one heard of it now salicylates had come, and he thought Dr. Carter would agree that, as a general practice, blistering in acute rheumatism had ceased, and it was not seen at the hospitals in England or abroad. With regard to endocarditis and blistering, he followed very clearly the exposition of the principles on which it was founded, viz. stimulation of the trophic nerves. Blistering might

do much good in directly assuaging any symptoms of pain, but in the long run it was a very problematical point as to its efficacy in the thickening which was called valvulitis. He thought they would agree that the matter was one which could not be proved by statistics. The profession had been given no end of statistics as to the treatment of rheumatic fever, including those by Dr. Fuller. These were brought forward to show that the alkaline plan was the right treatment, and that it specially relieved the valvulitis associated with rheumatism. Then there was the paper by Dr. Gull and Dr. Sutton to show that the alkalies did nothing in the treatment of acute rheumatism, and that expectancy and water were just as good. One had to consider whether blistering in the intercostal spaces, as recommended by Dr. Caton, did any good for true rheumatic endocarditis. His experience would lead him to say it did nothing at all. He also felt bound to say that there was no sign which could be relied upon as a trustworthy one indicating the course and progress of rheumatic endocarditis. Dr. Caton agreed it was not a painful malady. The symptoms given by that excellent observer Sibson as indicating the commencement of endocarditis in rheumatism were now considered as untrustworthy. One had seen cases in which there had been a marked mitral diastolic murmur occurring, not due to endocarditis, as shown at the autopsy, but due to enfeeblement of the heart, or pericarditis. Again, many cases which had been discharged as sound after rheumatic fever had come back afterwards with damaged hearts. Rheumatic endocarditis seemed to be a very subtle and slow process, coming on sometimes in a way which could not be traced, crippling the mitral curtains, cords, and columns, and producing incompetency. Sometimes it occurred even more slowly, causing mitral stenosis. He could not agree with Dr. Caton that any form of treatment in the intercostal spaces had any influence on endocarditis. Nor could he agree that patients did not grumble at the blistering treatment; he found they did complain of it. In the case of a child, Dr. Caton would doubtless agree that a child with the disease did not feel pain from it; it did not know that anything was amiss with its heart. Pericarditis, a swollen heart, and valvular disease might occur in that way and yet not be shown by any symptom whatever. His experience was that such a child did not like to have blisters put on its precordium, but where blisters were put on, his experience was that they made no difference to the disease. He was sorry to differ from Dr. Caton, as he felt sure that gentleman had studied the matter, as he had himself, without bias, and on a scientific basis; and when he spoke of therapeutic enthusiasm he used the words with a thorough belief in Dr. Caton. He urged trying to find out what the cause of the rheumatism was,

keeping patients quiet meanwhile. He did not think blistering had a bit of effect in curing the patient.

**Dr. Charles Macalister** (Liverpool) said the discussion of such a paper was hardly worth anything unless there was a difference of opinion, and they were much indebted to Dr. Sansom for the eloquent way in which he had discussed the matter. But after considerable experience he was just as emphatically in favour of blistering as Dr. Sansom appeared to be on the opposite side. In many cases of rheumatism complicated by endocarditis he was convinced that blistering had done good. Prolonged blistering, with the exhibition of iodides and recumbency, did the greatest good, and after watching such cases one could not find any return of the murmurs. Pericarditis also proved the value of blistering, for if taken early in a child and treated in that way, the pericarditis would disappear within twenty-four hours. He had watched such cases many times. In the case of children the irritant he used was the red iodide of mercury, in the proportion of one to eight. It was kept on for a few days until a blister was produced, then the blistering substance was removed and the part allowed to heal. He did not remember any children complaining about it particularly.

**Dr. H. R. Hutton** (Manchester) said that, having been taught by an old-fashioned physician in London, who had a great belief in the fact that some of the older methods of treatment had been needlessly lost sight of, particularly blistering and bleeding, he had tried blistering in rheumatism, and could testify to the fact that it relieved pain. If Dr. Sansom happened to have the good luck to become the subject of a sharp attack of rheumatism which would not yield to salicylates, he would get relief from blisters. Blisters did cause pain, but he could not say that they interfered with the patient's rest.

**Dr. James Barr** (Liverpool) said Dr. Caton had been trying for years to convert him to his views, but he was a sceptical individual; he was not convinced by the reading of a paper, by any man's practice, or even by his own. He had to think a matter out thoroughly and practise it before coming to a conclusion. He had carried out Dr. Caton's treatment to a large extent, but, although he thought it good, he was not dogmatic on the point. He was fond of counter-irritation in his own practice, but feared some were apt to reason *post hoc* for *propter hoc*. With regard to Dr. Macalister's remark that pericarditis could be made to disappear in twenty-four hours, he had a case in point. Two days ago he had a patient with very distinct roughening and pericardial friction, but this had now disappeared. Yet it was a case of most marked pericarditis, in which there were many pericardial adhesions of old standing. In such a case one was inclined to look upon the pericarditis as having disap-

peared, whereas it had done nothing of the kind. Why should the rheumatic poison infect the left side more than the right? Why should there be endocarditis affecting the mitral valve more frequently than the tricuspid valve? His opinion was that in all those cases the determining factor was a mechanical one; that a certain amount of strain was thrown on the valve, resulting in damage. If the heart was beginning to be affected by the poison, it could not continue to flap the valves 100 times a minute without damage. If the valves were carefully examined it would be seen that the mitral valve was damaged on its auricular surface, and that there was proliferation at the part, not at the edge, but where the two flaps came together. In such cases one could always, by listening to the heart, diagnose endocarditis forty-eight hours before hearing a murmur. In these cases there was not only an endocarditis but also a myocarditis. One recognised the dulling of the first sound; the left ventricle, struggling to overcome the resistance, took a long time to open the semilunar valves and empty itself. There was thus a delay in the transmission of the pulse wave from about  $\frac{1}{2}$  to  $\frac{1}{5}$  of a second, which could readily be recognised at the wrist. The salicylates were not sufficient for this; some depressant must be used. Sometimes the salines did more good than anything by producing purging and lowering the blood-pressure. Some time ago he had a case with a high-pitched musical murmur, no doubt due to high intra-cardiac tension, which disappeared with a dose of salts. In his experience a large number of those cases got perfectly well. He and Dr. Caton had worked for years in the same place, and he knew the excellent results obtained by Dr. Caton, but thought his own practically equalled them. He regarded much of the result as due to general treatment, such as rest, the lessening of all possible strain upon the heart by reducing the blood-pressure as far as possible. He believed counter-irritation did some good, but how much he was not prepared to say. He thought the counter-irritation produced by ointment did not suffice; something in the form of a mustard plaster should be applied.

**Dr. Caton** (Liverpool) [introduced], in reply, thanked those present for their very kind reception of his remarks. He had waged a little war over the subject with Dr. Sansom before, and did not expect to convince him. He wished to explain that although in the days when salicylates were unknown he concluded that the blistering treatment was the best, he did not think so now. In the majority of cases the salicylate treatment enabled one to do without the blistering. He only used blisters to the joints, and there they were most useful. He thought the same results were obtained from a small blister as from a large one, and the former produced no appreciable weakening. He had tried it on

his own person, and he knew the enormous relief from rheumatism he obtained by that method. He would ask Dr. Sansom whether he had tried blistering long and systematically, with the two other aids. He thought rest was the most important of all, but in his experience the best results were obtained by the three modes of treatment combined. The cases he referred to in his paper were those in hospital during the last sixteen years, cases recorded by clerks and tutors. Out of thirty-one cases of undoubted acute endocarditis, twenty-eight apparently were perfectly cured, and that was the main evidence he brought forward. Many of his friends had tried the method and seemed pleased with it.

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## 65. TWO CASES OF MENINGITIS SURGICALLY TREATED.

By KEITH MONSARRAT.

THE title of this note is somewhat indefinite, for reasons which will appear in its recital. I propose to narrate two cases of meningitis in which a surgical procedure was undertaken, and to make some remarks on the subject thereafter.

CASE 1.—F. M. W., aged 1 year, was admitted to the Children's Infirmary on April the 17th, 1900. The family history is unimportant. The only previous illness was measles in December, 1900. The history of the present illness is as follows.

Three months ago the child had a convulsion, and has since had similar attacks frequently, about two or three times a week ; she has gradually become stupid, takes no notice of her parents, and sleeps a great deal. The head has steadily increased in size during these three months, the child does not now raise her head off the pillow ; previously she was quite lively. The digestive system

has remained in fairly good condition throughout ; there has been vomiting on one occasion only. No history of trauma.

On admission the following notes were taken :—The child is in a stupid, drowsy condition ; the head is large and square, the greatest circumference being seventeen inches. The fontanelles are large, the parietal bones are separated in the centre of the sagittal suture to the extent of one and a quarter inches ; there is retraction of the head. There is a slight sero-purulent discharge from the right external auditory meatus ; on examination of the tympanum there is seen to be a small perforation at the lower posterior segment. The child is fairly well nourished. Pulsation at the fontanelle is very indistinct.

April the 21st.—The child has had two general convulsions since admission, there is otherwise no change in its condition.

On inquiry it was ascertained from the mother that the discharge from the right ear had only been noticed about a week before admission. The diagnosis arrived at was meningitis following otitis and consequent hydrocephalus. In spite of the mother's statement it appeared probable that the condition was associated with the otitis media. It was decided to open the skull over the temporo-sphenoidal lobe.

This was done on April the 22nd. The opening was made one inch above and slightly behind the right external auditory meatus. The dura mater bulged through the opening ; on incising this there was no excess of fluid in the subarachnoid space, and the meninges showed no inflammatory changes. An exploring needle was passed in several directions into the substance of the temporo-sphenoidal lobe, but no pus was found. On passing a fine trocar and cannula into the lateral ventricle flaky sero-purulent fluid escaped ; the opening in the skull was enlarged upwards and backwards before inserting this cannula. The cannula being withdrawn, a fine pair of sinus forceps carrying half a dozen strands of chromic catgut

was passed in the same direction and sufficiently far inwards to ensure reaching the ventricle.

Up to the time of operation the temperature was subnormal, except on the evening of the 19th and the morning of the 20th, when it reached  $98.8^{\circ}$  F. and  $98.4^{\circ}$  F. respectively. During the night following the day of the operation it rose to  $102^{\circ}$  F. There was also pyrexia the next day— $101^{\circ}$  F.,  $100^{\circ}$  F.,  $100.4^{\circ}$  F., and  $101^{\circ}$  F.,—but on the morning of the next day it was  $98^{\circ}$  F. To describe the after history shortly:—There was a considerable escape of fluid into the dressing for the first forty-eight hours, along the track of the strands of gut. The child was very restless during this time, but there were no convulsions or twitchings. The gut was left *in situ* until the dressings were almost dry, that is to say until the morning of April the 28th.

The child remained in hospital until May the 23rd, that is to say thirty-one days after operation. During this time there were no convulsive seizures and no sickness; the retraction of the head disappeared. The child slept and took food well, and gained flesh. The rather stupid condition persisted however until dismissal, and this was also present when seen a week after in the out-patient department.

The fluid removed from the ventricle was examined microscopically. It was distinctly purulent. Cover-glass preparations stained by Gram's method did not, however, show any organisms. The actual pathogenesis of the meningitis is therefore uncertain. The symptoms, especially the retraction of the head, the presence of pus in the ventricles, and the absence of any vertical meningitis, make a diagnosis of posterior basic meningitis almost certain.

I again saw the child on June the 8th. There have been no more convulsions. The mother says the child is livelier, and the head is now considerably smaller, the fontanelles having closed in to a marked degree. Though still dull, there is no doubt that the improvement has been maintained since leaving the hospital.

CASE 2.—W. C. D.—, a boy aged nine months, was admitted to the hospital on May 15th, 1901. The family history was good, and there had been no previous illnesses. The size of the head has been large since birth. The child was born at full time and instruments were used. The head has been steadily growing. The parents have noticed that he does not appear to see anything. The general health has been good.

*On admission.*—The child is well nourished and takes food well. All the organs appear to be healthy. The head is large, measuring,  $18\frac{1}{8}$  inches in the greatest circumference. The fontanelles are large, and the parietal bones widely separated. There is no discharge from the ears. The child lies quiet in bed, moves his limbs very slightly, and is drowsy. The eyes are continually in movement, rolling about, and the child does not appear to see any objects held in front of them. The pupils contract to light. The eyes were examined with the ophthalmoscope, but the continual movements, which were not in any particular direction, rendered it very difficult to inspect the fundus oculi, and all that could be ascertained was that the outlines of the discs were much blurred. Later Mr. Charles Shears kindly examined them for me, and reported that there was optic neuritis with much effusion in the neighbourhood of each disc. The history given by the parents and the absence of constitutional disturbance appeared to point to a condition of congenital hydrocephalus, and this was the diagnosis made before operation.

The skull was opened, with the intention of establishing drainage between the ventricles and the subarachnoid space in the region of the Sylvian fissure. The opening was made on the right side on May the 16th. On exposing the dura mater it was found to be much thickened, and on reflecting a flap the condition found was as follows:—A large amount of translucent semi-gelatinous and semi-fluid exudation overlay the convolutions, and was especially marked in the neighbourhood of the Sylvian fissure.

Between the arachnoid and dura were many delicate adhesions. Along the vessels of the pia mater were rows of greyish-yellow points about the size of a pin's head ; in places a confluence of these made up a larger patch. The exudation was subarachnoid in position. A fine exploring needle was passed into the right lateral ventricle, but though a small amount of fluid was withdrawn there was no excess there. All that was then done was to break down all the fine adhesions which could be reached (they were not vascular), and to allow all the fluid that could be drained from the subarachnoid space to escape. A bundle of strands of chromic gut was then made and the ends spread out fan-like in the subarachnoid space, the proximal extremities being brought to the surface at the posterior angle of the wound.

The after history was uncomplicated. The drain remained *in situ* for sixteen days, and a diminishing amount of exudation escaped into the dressing. As compared with his previous condition the following changes took place :—The fontanelles and sutures were depressed after the operation, and remained so after the drainage opening closed, and still remain so. There has therefore been no reaccumulation of fluid since external drainage ceased. On the fifth day after the operation the child became more lively and gradually became a more natural infant, throwing his limbs about freely and crying in the usual way. This change has been marked compared with his previous apathetic condition. He has only recently been discharged from the hospital. It appears, therefore, that the opening of the skull and drainage has been followed by some improvement in the morbid signs, but it is of course impossible now to maintain that this is anything more than a temporary halt in the course of the disease. With regard to the pathogenesis in this case, in the first place the condition was obviously mainly a cortical meningitis. The fluid was highly albuminous, but an insufficient quantity was collected to estimate the specific gravity by means at my disposal. Here, again,

I have no bacteriological evidence to give; as I have stated, before the operation it was thought that we were dealing with a case of hydrocephalus, and no preparations were made for a bacteriological examination. The appearances were more like those characteristic of tubercular meningitis, but the history does not read like this disease. The parents deny syphilis, and there have been no other signs of this disorder.

Neither case, therefore, was investigated in such a way as to throw any particular light on the ætiology. What they do appear to me to show is, in the first place, that simple drainage of the areas involved in the meningeal inflammation may be followed by a degree of improvement even in advanced stages. In Case 2 the process was far gone. Probably there was, and is, associated encephalitis; but, in spite of this, provision for the escape of inflammatory exudation has been followed by what may be spoken of as distinct improvement. In Case 1 the convulsions, which it may be assumed are a kind of index of the degree of the cerebral disturbances dependent on the inflammatory changes, ceased and did not return. The case for the removal by drainage of inflammatory exudation in meningitis does not appear to require argument, any more than that for the drainage of inflammatory effusions elsewhere, and the delicacy and importance of the structures affected make it the more urgent. This has hitherto been attempted (1) by lumbar puncture; (2) by the occipital operation; (3) by the vertical operation. Lumbar puncture should hardly, perhaps, be called drainage, as all that has usually been done has been puncture with the syringe once or repeatedly. I do not propose to discuss the occipital operation, as I have no experience of it. What I venture to suggest is, that no method is suited to the circumstances of the usual case which does not admit of satisfactory evacuation and drainage of ventricular effusion, as well as of the release of the exudation in the subarachnoid space. Both posterior basic meningitis and the commoner form of tuber-

culous meningitis (anterior basic) are usually accompanied by a collection of inflammatory effusion in the ventricles sufficient to distend them. Drainage of the fourth ventricle does not necessarily imply drainage of the lateral ventricle, and the access afforded by the occipital operation to the basal structures and the basic lesion appears to be by no means free. On the other hand, operation by another route affords easy access to the ventricular effusion, and easy provision for satisfactory drainage of this, at the same time giving as free access to the involved areas of inflammation at the base as appears to be provided by the occipital route. I refer to the plan of opening the skull over an area corresponding to the anterior third of the superior temporal gyrus and the adjacent part of the Sylvian fissure. In Case 2 the skull was opened near but rather behind this point, and by gently separating the structures with a fine, flat retractor it was found possible to give exit to a considerable quantity of exudation, and to pass the ends of the gut over an extensive area towards the base, and one might, I think, be considerably bolder without risking damage to important structures. Access is easy from this situation to the descending horn of the lateral ventricle, the most favourable situation from which to give exit to fluid within the lateral ventricle.

As compared with the occipital route, the one recommended appears to have the following advantages:—  
(1) Less difficulty and consequently less shock; (2) greater certainty of providing satisfactory ventricular drainage; (3) less risk in damaging important structures.

In the after treatment the head should, of course, be kept on the side operated on.

*(Read June the 29th, 1901.)*

### Discussion.

**Dr. Cautley** said he did not wish to remark on the surgical results in these two cases, as they had been excellent, but to point out the extreme difficulty of getting good results. There

was the initial difficulty—and the younger the child the greater was that difficulty—of ascertaining whether one had to deal with a case of simple basic meningitis or tuberculous meningitis. Many cases of the former would recover without any operative treatment whatever. If it were tuberculous, the next difficulty was as to whether it was limited, or whether it was part of a general tuberculosis. He thought it would be agreed that quite 90 per cent. were cases of general tuberculosis. Again, supposing, by a careful process of exclusion, one came to the conclusion that it was a tuberculous meningitis limited to the base of the brain, the next difficulty was to ascertain whether there was any excess of fluid in the ventricles at all. He confessed that although he had examined cases, both clinically and pathologically, with a view to ascertaining whether there were any diagnostic features, he was at present unable to say in any case positively whether at the post-mortem one would meet with tuberculous meningitis in which there was no excessive fluid in the ventricles, or whether there would be a large excess, or whether it was a case in which there was softening. He did not think all the cases died in the same way. Some of them died from excessive fluid in the ventricles and its resultant pressure; but the majority did not die from pressure so much as from interference with nutrition through the inflammatory process involving the lymphatics and small vessels at the base of the brain. So it seemed that, although they might call in the surgeon continually to do those operations, they could only expect a satisfactory result in a very few. He read a paper on the subject before the British Medical Association, and the results in his cases were absolutely hopeless, as no recovery took place. Post mortem it was clear that even if the surgical treatment was carried out satisfactorily, the process not being limited to the brain, it was hopeless to expect any benefit from surgical treatment.

**Dr. John Logan** (Liverpool) [introduced] said he had some time ago a case in which he drained one of the ventricles. It was obviously a case of chronic hydrocephalus. As it was enlarging somewhat rapidly, it was suggested that the lateral ventricle might be punctured and drained. The method was not so elaborate as that adopted by Mr. Monsarrat. He kept as far away from the motor areas as possible. He made a small puncture and introduced a moderate-sized trocar and cannula into the lateral ventricle. Through that cannula he pinned in four inches of very fine india-rubber drainage-tube. He then pulled out the cannula two inches, and left about two inches of drainage-tube in the cranial cavity. He allowed only a certain quantity of fluid to escape, and then covered the wound with antiseptic dressing. The house surgeon later

undid the dressing and allowed some more fluid to escape. That ensured the collapse of the skull being very gradual. The child was fairly comfortable and its pulse satisfactory, but the bones of the skull overlapped one another. In six weeks the mother brought back the child far worse than ever, and was most anxious that the same procedure should be repeated. It was accordingly done, but the child died.

**Mr. Damer Harrisson** (Liverpool) said his experience of drainage in cases of hydrocephalus had been very much like that of Dr. Logan. He had recently had some cases which seemed to improve—they were alluded to by Mr. Monsarrat—in which chromicised gut was passed into the lateral ventricles for the purpose of draining the fluid into the base. But unless he saw more favourable results he was not inclined to proceed with the operation.

**Mr. Keith Monsarrat** (Liverpool), in reply, said he did not think the last word had been uttered on the question of drainage in meningitis. As Dr. Cautley had said, it was difficult to know what type of meningitis one was dealing with. The point of the paper was, that if drainage was to do any good in meningitis, in what direction should the fluid be conducted? His view was that no plan was satisfactory which did not combine ventricular drainage with drainage of the subarachnoid space. That seemed to him to be a more suitable direction than the occipital. With regard to hydrocephalus, he thought external drainage had been practically abandoned. The plan mentioned by Mr. Damer Harrisson had been followed by good results in some cases. Dr. Barlow, in Allbutt's 'System of Medicine,' spoke of one satisfactory case, and one was narrated in the 'British Medical Journal' for the current week (June the 29th, 1901).

#### 66. TWO CASES OF CIRRHOSIS OF THE LIVER IN CHILDREN, WITH OBSERVATIONS.

By CHARLES J. MACALISTER, M.D.

In the Country Hospital for Chronic Diseases of Children we have had two cases of cirrhosis of the liver during the past eighteen months, and an opportunity has been afforded us of observing the clinical course run by each of them over a very considerable period. They were cases,

probably, of the same anatomical type of cirrhosis, although their clinical features were essentially different, the one having ascites but no jaundice, the other having jaundice without ascites; but both presented evidence of portal obstruction in the numerous large veins which radiated over the abdomen.

I regret to say that the most careful investigation of the physical conditions of these cases has not enabled me to throw any certain light upon those causes which may have been at work after the incidence of the cirrhosis, and which seem to have rendered it a progressive disease in, at all events, one of the cases; and I am only able in this relation to advert to the histories of the cases, which have completely satisfied me that alcohol played an important part in the causation of one of them, and no less certainly that the other originated neither from that nor from syphilis, but from some toxin, of the nature of which I am ignorant, and can only offer suggestions by analogy.

The first case which came to the hospital was that of a boy aged four years, and if the statement of his parent was to be relied upon, he must have come under observation at a comparatively early period of his disease—at all events no symptoms whatever were observed until four weeks prior to his admission, when he was taken to one of the large general hospitals and retained for a week owing to some indefinite abdominal trouble. A fortnight later, after he had returned home, the ascites commenced and rapidly increased, so that by the time I first saw him his abdomen was very distended, measuring  $2\frac{1}{2}$  inches; and his liver, the surface of which presented coarse irregularities, could be felt by dipping through the fluid. It measured  $5\frac{1}{2}$  inches in the nipple line, and projected for  $3\frac{1}{2}$  inches below the costal margin. The epigastric veins and those along either side of the sternum were much distended. The urine contained no bile at any period. The boy, on admission, was ill-looking, pale, and fretful, and his digestion disturbed, but he became happy, cheer-

ful, and healthy in appearance, with rosy cheeks, after the subsidence of the ascites, and thereafter his appetite and digestion were good, and he seemingly suffered no inconvenience from his liver trouble. The spleen was not markedly enlarged, and his other organs were healthy.

During the first month this patient was treated with small doses of mercury. The liniment of mercury was rubbed daily into his abdomen, and he had an occasional dose of scammony and jalap, with the result that the ascites gradually disappeared. After this the ointment of the red iodide of mercury was rubbed over the hepatic area each day until an irritable red surface with a papular eruption was produced (about seven or eight days being required to accomplish this), when the ointment was omitted, but was again repeated on recovery of the skin. Fifteen grains of iodide of potassium were administered daily. This treatment was continued for four months, with two short interruptions, and in view of the circumstance that in the hypertrophic form of polylobular cirrhosis the liver is rarely observed to diminish in size while the case is under observation, it is interesting to note that in the case which I am now relating it gradually diminished until its margin could just be felt below the ribs, the dulness then measuring  $3\frac{1}{2}$  inches. With this decrease in the size of the organ there was steady improvement in health and nutrition; the weight in three months increased by two pounds, and when he was discharged from the hospital at the end of six months the abdominal veins were hardly visible, and he was to all appearance quite well. Five months later he was seen again; the liver could just be felt under the costal margin, its edge was slightly irregular, and he remained well.

This child came from a very disreputable and drunken home. At the time of his admission to the hospital it became necessary for an officer to visit the home, and we received the report that everybody in it was intoxicated excepting the mother, who was ill in bed, and her condi-

tion may be conjectured from the fact that both she and her husband were subsequently sent to gaol for cruelty to and neglect of their children. The giving of alcohol to the child by lodgers in the house was admitted in this case, but it is often difficult to elicit a history of its administration, partly, no doubt, because the parents consider the little sips or doses which they give of it, as being of no importance; but that they are of importance is suggested by the history of another similar case which was under my care at the Stanley Hospital some years ago, where a boy aged thirteen, who was a billiard marker, acquired the disease by drinking the small amounts of wines and spirits which were left in glasses by visitors at the hotel where he was employed. One never hears of a child being an habitual drunkard, and if alcohol is the cause of this disease, it must be the frequency with which it is taken, which proves so irritating and so detrimental to the organ. I could not find any syphilitic stigmata in the case which I have just related, the only point in this relation being that the mother had had some miscarriages, and she stated that one baby had died "with a big liver." But it was not on account of this history that I exhibited remedies usually given for syphilitic conditions, and there is some probability that the improvement was brought about by the absorption of a comparatively recent inflammatory exudate, aided by the physiological and counter-irritant effects of the mercurial preparations employed. In a case of this description it is probable that a large amount of hepatic structure remains unaffected, and that if the disease becomes arrested at any early period, such portions of the liver as have been destroyed or incapacitated, will have their functions performed by the remaining healthy parts, which may hypertrophy and fully compensate for the damage done.

The second case which I have to relate is one of great interest, and presents a history indicating that the poison which gave rise to the cirrhosis was one which, however

first introduced into or produced in the body, was reproduced again and again, and gave rise to exacerbations of symptoms of an acute character, followed by remissions, during which there was comparatively good health. The disease was, however, progressive, and at last proved fatal, after running a course of five years.

The child was a girl aged 13 years, who first came under our care on May the 12th, 1900, and remained under treatment and observation until her death on May the 26th, 1901. She was the eleventh child of a family of twelve children, nine of whom, as well as the parents, were alive and healthy. Our inquiry showed that her home was one of temperance and respectability, and that there was no reason for suspecting that she had been given alcohol at any time. Her only previous illnesses had been chicken-pox at four, and measles at six years of age. Both of these were recovered from satisfactorily, and there was no indication that any of the ordinary infective fevers had started the process. She had been a perfectly healthy girl up to a particular day four years before her admission, when she was seized with severe vomiting in the night, and her nose bled profusely. The vomiting went on for some days, and the jaundice, from which she was never afterwards entirely free, commenced at this time. The nose-bleeding was of almost daily or nightly occurrence during the first six weeks of her illness, and thereafter it occurred at varying intervals. The vein up the centre of the abdomen soon became swollen and very painful, and early in the disease there was much wasting but this appears to have ceased after a while, and with fairly good health during the intervals between the exacerbations, which I shall presently refer to, she became able to attend school until a few months prior to her being brought to us, when, concomitantly with greatly increased jaundice, nose-bleedings, diarrhœa, etc., the wasting again became acute, her limbs became weak, and she was for about the fifth time brought to a hospital in hopes of obtaining relief.

On admission to the hospital the child was intensely jaundiced. The stools were white. The urine was deeply bile-stained, but contained neither blood nor albumen. There was no ascites, but the superficial abdominal veins were prominent and varicose-looking in one place. The abdomen was enlarged, owing to the increased size of the liver, which in the mammillary line measured five and a half inches ; its surface felt hard and hopped, and the margin presented marked irregularities ; it was tender on pressure. The gall-bladder could not be felt.

The spleen was much enlarged, projecting three finger-breadths below the ribs, and the dulness measured five and a half inches ; it was smooth and painless. There was no purpura. The right side of the heart was somewhat dilated. The digestion was disordered, the breath offensive, the tongue furred, appetite poor, occasional pain after meals, and the bowels moved once or twice daily. There was no haemochromatosis. Such was the condition of the case when admitted, and one can epitomise its subsequent course (which seems to have been a picture of its past) by stating that in the twelve months during which she was in the hospital there were seven acute attacks, the intervals between these lasting at first from twelve to fourteen weeks, but becoming much shorter in the last three months of her life. When I speak of acute attacks I do not desire to imply that the remissions were free from symptoms ; on the contrary, there was during these periods every evidence that the disease was a progressive one, although little discomfort was suffered, and the child seemed cheerful, able to take her food well, and to enjoy out-of-door exercise with her companions ; but there was always some fever, the temperature ranging between 99° F. and 100° F. The nose bled every now and again, and there were occasional headaches, and although the stools became bile-stained, varying from biscuit colour to dark brown, and the urine was sometimes clear of bile, yet the jaundice never disappeared. I have remarked

that the liver at first measured five and a half inches, and there is some reason for believing that this enlargement was related to the severe and prolonged attack from which she suffered shortly before her admission, because within a month its rough border could only be felt under the ribs. That this contraction was not accompanied by any increased portal obstruction was suggested by the diminished superficial venous engorgement, by the lessened gastric catarrh, and by the increased nutrition of the patient, who rapidly put on flesh, and in the longest intermissions gained over 6 lbs. in weight.

The acute attacks of which I have spoken were characterised by a rapid rise of temperature to 104° F. or 105° F., the morning temperature being about 100° F. There was severe headache, a feeling of fulness and stiffness about the throat, which with the palatal and nasal mucous membranes became covered with mucus. The breath was offensive, the tongue coated and foul. There was much drowsiness, increased jaundice, and great prostration. Vomiting was generally present, but diarrhoea was not a characteristic symptom. The nose and gums bled freely during and for some time after these attacks, and it was also noted that any small scratch bled freely. The spleen on one of these occasions was observed to be further enlarged, its dulness measuring six and a half inches, and the liver also enlarged slightly, but it never increased to the size which it was on her admission to the hospital. In October, 1900, a hard, rough, triangular projection of the liver was noted in, and to the right of, the epigastrium. This never afterwards became palpably altered in character or size.

In the middle of March, 1901, in association with fever of a fortnight's duration, the temperature ranging from 99° F. in the mornings to 101° F. or more in the evenings, a rough systolic murmur appeared at the cardiac base, and a softer one at its apex. During this period there was a succession of severe headaches, with drowsiness and other toxic manifestations, and there was much bleeding of the

gums ; then followed a series of very acute attacks, with increased fever ( $103^{\circ}$  F.— $105^{\circ}$  F.), the later ones being preceded by rigors ; again, the jaundice increased and bile disappeared from the stools. An examination of the blood failed to discover any organisms, but there was leucocytosis. On May the 4th, after an intermission of fifteen days, during which there were none of the more prominent toxic symptoms, the child being bright and having to some extent regained strength, she was for the first time seized with an acute abdominal pain, followed by severe rigors and vomiting of blood and bile. Purpuric spots appeared on the legs, and the ankles became swollen. This attack was the beginning of the end, but a curious circumstance in connection with it was the reappearance of bile in the stools after being absent for more than a month, and she became less jaundiced than we had ever seen her previously. These painful paroxysms, which were referred to the region of the liver, now recurred frequently. The temperature assumed a better character, reaching  $104^{\circ}$  F. in the evenings. The peritoneal cavity began to fill rather rapidly with fluid until May the 28th, when, following an agonising attack of abdominal pain, there was copious haematemesis, then coma for some hours, ending in death.

These two cases, which were in the ward at the same time, have served to suggest, in the first place, that provided an irritant, such as alcohol, can be stopped, and its results upon the liver, whether they be direct or indirect, brought to an end at an early period, it is possible for some good to come of treatment. Eight years ago I was asked to see an old gentleman who was suffering from an attack of haematemesis. There was atrophic cirrhosis of his liver, and the dilated condition of his abdominal veins pointed to the presence of portal obstruction. This, as his daughter informed me, had been brought about by intemperance. After this illness his daughter, being a strong-minded young lady, succeeded in putting a stop to the alcohol, and certainly her father has had very good health in the

past year or two, and has had no symptoms indicating an advance in his portal obstruction.

I need hardly capitulate the theories which have been advanced, and the experiments and observations which have been made, to explain the nature and seat of the toxin in the class of cirrhosis to which my second case belongs. It is quite undecided whether the poison produces its effects upon the liver by an ascending infection from the alimentary tract, or whether it is primarily a blood infection producing its effects upon the liver and spleen by selective influence through the systemic circulation. A naked-eye examination of the liver would lead one to suppose that we were dealing with an advanced polylobular cirrhosis; but when we come to examine it closely, numerous indications are found that masses of liver-cells have entirely disappeared, and that fibrous tissue has taken their places, there being a relative increase of fibrous tissue, whilst elsewhere they are found, some of lobular, others of polylobular size, and in some places little groups of cells which can be easily counted. Whatever their size, there is cell degeneration everywhere, and intercellular as well as perilobular production of new fibrous tissue. It is a mixed type of cirrhosis. It seems to me probable that, however introduced into the blood, the poison in a case of this description acts largely through the systemic circulation simultaneously producing its effects upon the liver and spleen, and that whilst we have to deal partly with a descending inflammatory process, the periportal phlebitis is produced either through the splenic infection, or by absorption of additional intestinal ferments. That the poison is in the first place introduced with some article of food would appear to be probable. Acute necrotic changes, with early perilobular exudations, are known to be found in some cases of acute ulcerative and haemorrhagic colitis, as in a case reported by Dr. Thomas David Lister in the 'British Medical Journal' of September the 29th, 1900. I saw a case presenting a precisely

similar clinical picture with my colleague, Mr. Newbolt, last September, which was due to the ingestion of a pork pie, and it seems to me quite likely that poisons which possess less immediate virulence are likely to produce perversions in the blood which are never afterwards recovered from, their effects being upon those organs which are peculiarly susceptible to their influences. I might refer in this relation to the occasional history which we get in cases of diabetes, where the disease begins acutely after the patient has eaten a poisonous foodstuff. Dr. Carter had an example of this some years ago, where two young men ate for their lunch some cold sausage at a restaurant ; they were both rendered ill, and sugar appeared in their urines. In one case it disappeared and recovery took place, but in the other lasting changes were produced, the diabetes never got well, and led to breaking down of the lung, from which he died.

*(Read June the 29th, 1901.)*

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#### 67. A CASE OF PNEUMOCOCCAL PERITONITIS.

BY J. H. BRYANT, M.D.

HARRIET S—, aged four years, was admitted into Guy's Hospital under my care on May the 11th, 1901, for vomiting and abdominal pain. She had always enjoyed good health until the evening of May the 9th, when she was seized with severe vomiting after supper. She vomited about six times during the night. The sickness ceased on the following morning, but she appeared to be very ill, and would not take her food. On the morning of the 11th, as she was much worse, and had not taken any food, she was brought up to the hospital, and was at once admitted. She had not been sick since the evening of the 9th.

The bowels were opened on the 10th, and the motion appeared to be natural. There was no discharge of blood or mucus from the rectum.

On admission the pulse was 140 to the minute, the temperature  $102.8^{\circ}$  F., and the respirations 40 to the minute. She appeared to be very ill, and had a drawn and anxious expression. The abdomen was tense, rigid, and very tender all over. There was no particular pain or tenderness in the right iliac fossa. There were no physical signs of pleurisy or pneumonia. I saw the child soon after admission, and came to the conclusion that she was suffering from acute peritonitis or diaphragmatic pleurisy, and I suggested the possibility of a pneumococcal infection on account of the absence of any localising symptoms of appendicitis or other diseases. Mr. Dunn saw the child with me shortly afterwards, and decided not to operate, chiefly on account of the absence of vomiting and constipation, and because he was inclined to the view that her condition was due to diaphragmatic pleurisy or pneumonia.

During the night she was decidedly worse; the abdomen became more rigid and tender, but the drawn anxious expression was not so well marked. She also vomited three times, and it was with great difficulty that she could retain any food.

On the morning of the 12th Mr. Dunn saw the child with me again, and decided to operate. The abdomen was opened in the median line, and general peritonitis was found. There was a good deal of slightly turbid fluid in the peritoneal cavity, and the intestines were covered with flakes of pale greyish-yellow lymph. The fluid had no odour. The appendix vermiciformis appeared to be a little swollen, and it was removed. A subsequent examination showed no ulceration, and the swelling was no more than could be accounted for by the peritonitis. It was certainly not the primary focus of the peritonitis. The peritoneal cavity was washed out, and a drainage-tube was left in. I examined some of the peritoneal

fluid, staining some cover-glass preparations with Macdonald's capsule stain, and found a number of capsulated diplococci, which I considered were pneumococci. Cultures were also taken, but no growth resulted.

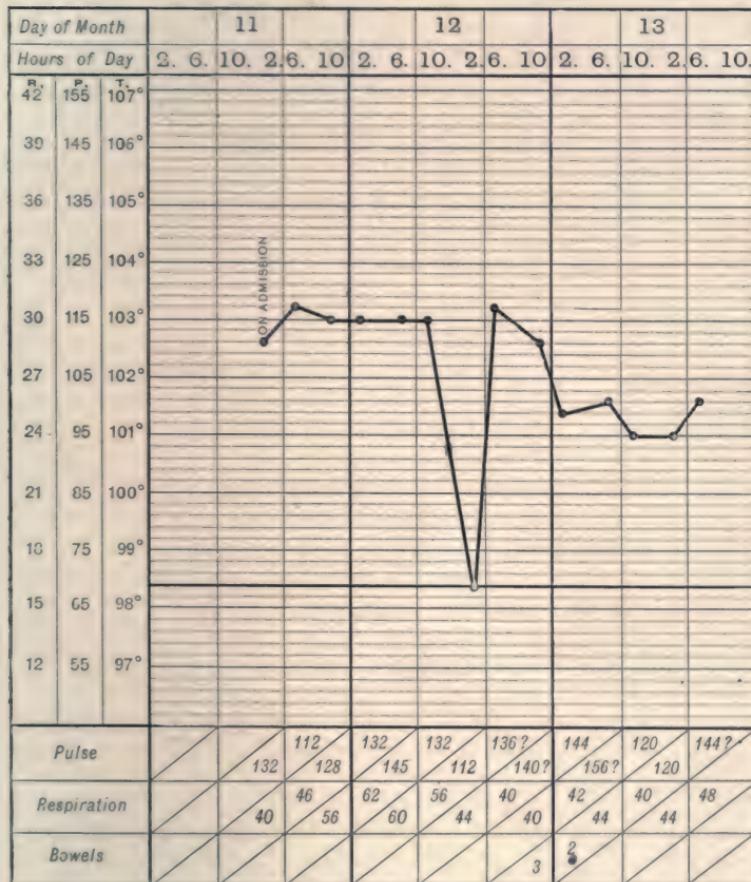
After putting the child back to bed the pulse became very feeble, and stimulants were administered. In the afternoon she had an attack of profuse diarrhoea, which was stopped with a starch and opium enema and bismuth. As the pulse did not improve saline enemata and infusions of saline solution into the axillæ were administered. During the night she became very restless, and continued so all the following morning. She died suddenly on the afternoon of the 13th, at 4.30 p.m.

I made the post-mortem examination twenty-one hours after death. Rigor mortis was well marked. The body was rather wasted and anaemic. There was general acute pleurisy, both lungs being covered with light greyish-yellow, thin recent lymph. There was a small quantity of thin, slightly turbid serous fluid in both pleural cavities. There was no pneumonic consolidation of any part of either lung, and no evidence of any commencing pneumonia. The larynx, trachea, and bronchi appeared to be normal. There was no pericarditis. The heart weighed 51 grammes; it was healthy. The arteries were normal. There was general acute peritonitis. The peritoneal blood-vessels were congested. The coils of intestine were adhering to each other by means of pale greyish-yellow lymph. In the pelvis there was a little turbid serous fluid. There was no local lesion to account for the peritonitis. There was no ulceration of the stomach, duodenum, or small or large intestine. The condition of the appendix vermicularis has already been mentioned. There was no suppuration of any of the abdominal viscera. The liver weighed 184 grammes, and the spleen 54 grammes; they were both normal. The kidneys weighed 102 grammes, and were quite normal.

Cultures were taken from the blood in the right

ventricle, from the spleen, and from the pleural and peritoneal cavities. Pneumococci were found in pure culture in the first three, and with staphylococci in the last. Microscopical preparations from these sources also showed capsulated diplococci. Mr. Pakes examined the cultures

FIG. 18.



and cover-glass preparations, and confirmed the opinion that the diplococci were pneumococci.

*Remarks.*—The cause of death was pneumococcal septicaemia, for pneumococci were found in the heart, blood, spleen, pleural and peritoneal cavities. The question

naturally arises as to the source and channel of the infection. There was no obvious primary lesion found in any part of the body, and the clinical and pathological evidence pointed to the peritoneum as the first structure to be attacked. Did the pneumococci first gain access to the peritoneum through the alimentary canal and cause acute peritonitis, and then infect the blood, or was it a primary blood infection, the peritoneum being the first structure to be attacked? I have brought forward this case as one of pneumococcal peritonitis, as all the symptoms pointed to the peritoneum as the structure to be first implicated, there being no indication of the lungs or pleura being involved; and the post-mortem evidence also corroborated this view, for the morbid changes were more marked and advanced in the peritoneum than in the pleura.

The case I have just recorded makes the third which I have had the opportunity of investigating during the last eighteen months. The appearance of the lymph, and the character of the fluid, and the clinical history in each of these cases reminded me very forcibly of several cases I had seen some years ago, in which no local lesion was found, and which were classified under the vague and unsatisfactory heading idiopathic peritonitis. I am of opinion that a large proportion, if not all, of these so-called cases of idiopathic peritonitis would have proved to have been due to pneumococcal infections had they been examined from a bacteriological point of view.

#### Discussion.

**Dr. James Barr** (Liverpool) said he had a case a short time ago of universal pneumococcal infection. The symptoms pointed to ordinary pneumonia, but it never developed, as the patient died before that stage was reached. The symptoms were those of pneumonia, pleurisy, peritonitis, and meningitis, all of which were proved post mortem to be due to pneumococcal septicaemia. What struck him as peculiar was that Dr. Bryant's case should be described as one of *pure* pneumococcal infection. It would be interesting to hear what the temperature was.

**Dr. Bryant:** 102.8° F., and it ran a course very much like that of pneumonia.

## 68. REMOVAL OF A LONG NAIL FROM THE SECOND PORTION OF THE DUODENUM.

BY R. CLEMENT LUCAS, B.S.

H. W—, aged 22 months, was admitted into Guy's Hospital on March the 18th, 1901, on account of a foreign body lodged in his intestine. Three weeks before admission he was playing with a nail in a bottle ; he put the latter to his mouth, sucked out the nail, and swallowed it. His mother, hearing him choke, was just in time to see it disappear from view down his pharynx. The nail was believed to be about 2½ inches in length. Since that time his bowels have been opened regularly every day but no nail has passed, and on Thursday last, the 14th of March, he vomited his food.

On the day the accident happened the patient was skiagraphed, the shadow being thrown on the screen, and the nail was then seen lying in a vertical position with its head downwards just to the right of the spine ; it appeared in the shadow to extend from the first to the fourth lumbar vertebræ. On March the 25th, a week after admission, he was again subjected to the Röntgen rays. The nail was seen to lie in precisely the same position, and a photograph was taken of it. The negative showed the nail to be lying with its point upwards about ½ inch to the right of the vertebral column, and its length appeared to be about 2½ inches.

*An operation* for its removal was undertaken on the following day. A vertical incision about 4 inches in length was made in the right linea semilunaris in a direction downwards to the level of the umbilicus. The superficial structures and tendons having been divided the peritoneum was opened, when a piece of omentum

protruded and was pushed back. An examination of the abdomen was then made with the forefinger through the wound, and the nail could be felt lying in a vertical position on the inner edge of the right kidney, far back on the posterior abdominal wall. As the colon lay to the outer side the nail could not be reached in the direction of the incision ; the hepatic flexure was next drawn well over to the left side and an examination made from beneath it. The nail could be more readily felt from this position, but in an attempt to reach it, it became displaced, and took up a horizontal position with its head to the left side, having evidently been pushed into the third portion of the duodenum. It required a considerable amount of manipulation from the back of the abdomen, with the right hand, aided by the fingers of the left hand, to make the nail again project from the second portion of the duodenum. When this was done a pair of Spencer Wells's forceps was used to hold the nail from the outside of the intestine, and the point of the nail was turned upwards and to the right.

The intestine was now carefully packed all round with sterilised gauze. Two anchor stitches of silk were next passed through the muscular coat of the duodenum on either side of the projecting point. The point of the nail was then cut down upon between these stitches, which were used simply to prevent the wound, when made, from dropping away out of sight. Immediately the intestinal coats were cut, the point of the nail protruded and was seized with the fingers and easily drawn out as far as the head. The wound was not enlarged for the head to pass, but by turning the nail a little on one side the head was made to escape. The incision into the intestine was not more than a quarter of an inch in length, and being fixed by the two anchor stitches it was easy to introduce six fine Lembert silk sutures to close it. The surface of the intestine immediately around was washed with formalin ; the packing was next removed, and a small bleeding point in the peritoneum stopped. The peritoneum was sewn



PLATE XI.

Illustrating Mr. R. C. LUCAS's case of Removal of a Long Nail  
from the Second Portion of the Duodenum.





up with a fine continuous silk suture ; five more stitches of stouter silk were used to bring the muscular layer together ; the skin was united by continuous horse hair suture ; the surface was washed with formalin, and sterilized gauze and pads applied. The child for the first forty hours was fed entirely by the rectum, having every four hours alternately 2 oz. of peptonised milk with a drachm of brandy and 2 oz. of peptonised beef-tea with the same quantity of brandy.

On March the 28th, two days after the operation, the temperature being subnormal, a teaspoonful of milk was given every half hour, rectal feeding being still continued.

29th.—The temperature rose last night to 101° F., but is normal again this morning ; the amount of milk was increased to two teaspoonfuls every half hour.

31st.—Temperature normal and patient doing well. Farinaceous food was ordered, and an increase of milk.

On April the 1st, the patient's temperature having risen above 100° F., the wound was dressed, and looked perfectly healthy, and there was no tenderness about the abdomen.

4th.—The wound was again dressed, when it was found to be completely healed, and the stitches were all removed.

9th.—Although the wound is healed and there is no sign of any peritonitis, the child's temperature rises frequently to 102° F. in the evening, though normal in the morning, and he occasionally vomits.

13th.—The child still vomits at intervals and has diarrhoea, but there is no sign of peritonitis ; the temperature is lower. Some intestinal irritation continued for a week or two, but the temperature seldom rose to 100° F., and became steadily normal at the end of a month. The child was discharged quite well on May the 12th.

The nail removed was a French machine-made nail measuring exactly two inches.

*Remarks.*—The case illustrates the extreme value of the Röntgen rays in determining the exact site of a

foreign body when impacted in the intestine, it also shows that the shadow obtained is not strictly accurate as to size, the foreign body being nearly always magnified, the increased length in this case amounting to exactly half an inch. The shadow photograph showed, however, the exact position of the nail relative to the vertebral column, and as this position had remained for a month unaltered, and the nail was vertical in its direction, it could scarcely be in any other portion of the intestine than the second portion of the duodenum; it was pretty clear that it had stretched this portion of the infant's intestine, and that it failed to make the curve into the third portion of the duodenum. Only when I was manipulating at great disadvantage, owing to its depth from the surface, did it tend to pass on into the third portion of the duodenum. The difficulty now was to maintain it in position whilst I cut down upon it; I could only do this by grasping it with forceps from the outside, as on two occasions when trusting the nail to the fingers of an assistant it slipped away. The wound made was of a very trivial character, but the nail had no doubt caused a good deal of damage before its removal. Everything connected with the operation ran a perfectly aseptic course. The bowel irritation which followed a week or ten days later was entirely of a gastro-enteric form, following the resumption of solid food, and could not be traceable to any evidence whatever of peritonitis. A skiagram and the nail removed were exhibited.

(Read June the 29th, 1901.)

## 69. ON BIMANUAL EXAMINATION IN THE DIAGNOSIS OF ABDOMINAL DISEASE IN CHILDREN.

By JAMES CARMICHAEL, M.D.

THE importance of a bimanual examination in the diagnosis of abdominal disease in children is, in my experience, not fully recognised, nor made a routine practice, as it ought to be. I have always taught the students attending the clinical instruction at the Royal Hospital for Sick Children never to omit this simple method of investigation. The last case I saw illustrative of the value of this method was that of a child brought to me from the north of England. She had been recently examined by two eminent medical men, who had been unable to give a positive diagnosis, having only made an external examination. I also failed to detect anything until I employed the bimanual method, when the finger in the rectum easily detected a hard tumour attached in the pelvis, and several small nodular masses higher up in the abdominal cavity.

This method of examination is more applicable and easily carried out in the child than the adult, as in children the abdominal parietes and muscles are much softer, and the pelvis flatter. The younger the child, the easier the examination. In a child under four years the average measurement from the tip of the coccyx to the umbilicus, when the abdominal wall is pushed down to meet the advancing finger, is about four inches. The length of the forefinger from the web between it and the middle finger to the tip is  $3\frac{1}{2}$  inches in my own case. It is, therefore, evident that anything below the transverse line of the umbilicus can be easily felt *per rectum*. The mode of examining is as follows:—The child, being anæsthetised, is placed in the dorsal position, with the legs drawn up close to the edge of the bed. The operator kneeling on the floor

at the bedside, introduces his forefinger into the rectum, *the hand and forefinger being fully extended*. The web between the middle and forefinger thus presses against the coccyx, that between the thumb and forefinger is against the symphysis pubis, while the middle, ring, and little fingers are extended centrally along the sacral spine. With the hand in this position the forefinger reaches a higher position in the abdomen than is possible by any other method. (Read June the 29th, 1901.)

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#### 70. REMARKS ON A CASE OF INFANTILE SCURVY.

By JOHN McCAW, M.D.

INFANTILE scurvy, or scurvy rickets, presents such well-marked signs and symptoms in the majority of cases, that little difficulty is, as a rule, experienced in correctly diagnosing the affection. I have, however, recently seen an example of this disease in which the classical symptoms were all but absent, and an opinion had to be given based upon the presence of one symptom, supported by the history of the case. I was asked to see Baby McG—, aged ten months, on the 3rd of April, 1901, in consultation with the regular medical attendant of the family.

*History.*—The child had been in his usual good health until a week previously, at which time he became ill with what was considered to be a mild gastric attack. The temperature never exceeded 101.5° F.; the pulse was good and about 100 to the minute, and the bowels were inclined to be relaxed. However, a short time before I was called in he vomited a considerable quantity of blood, and this was followed almost immediately by a copious, loose motion, which was undoubtedly largely composed of altered blood.

On examination there was evidence of loss of blood,

but I was struck with the strength of the pulse and of the apex-beat. I learned on inquiry that this child had been fed *from birth* upon condensed milk, and later upon a proprietary food and oat flour; that it had never been given any fresh milk or other food whatever of an anti-scorbutic kind.

Infantile scurvy was diagnosed, and the treatment modified to meet that condition as follows:—One teaspoonful of orange juice to be given every two hours; to have whey and cream at frequent intervals and in small quantities, with one teaspoonful of raw meat juice every four hours. I advised the application of the ice-bag to the epigastrium for half an hour, the effect to be carefully watched. I saw this child again the following day; he had passed a good night and was much better in every respect. The orange juice was taken with avidity, and the nutriments mentioned were taken and retained; the temperature was 100.2° F., and the pulse 98 to the minute and stronger. No more vomiting had occurred, but one loose motion had been passed, which contained much altered blood. Eight days afterwards I was asked to see the case again, and it is hardly too much to say that I saw a different child, so marked and striking was the change for the better in every respect. I now advised that he should have a mixture of arsenic and iron (Fowler's solution and Vinum Ferri citratis) in suitable doses, as well as a small quantity of scraped potato or other fresh vegetable in his soup; and further, that he should be taken to the seaside. He made a complete recovery.

*Remarks.*—I think this case is noteworthy for the absence of the more prominent symptoms usually seen in scurvy rickets; no periosteal swelling could be found anywhere at any time, though carefully looked for; the gums were quite normal in every respect, and two upper and two lower central incisor teeth appeared healthy; there was no proptosis of either eye, nor was there any ecchymosis or œdema of either eyelid. Subcutaneous haemorrhages never took place, not even petechial spots

on the trunk, or lower extremities, nor were any bruise-like marks ever seen. The child never made any complaint, nor evidenced any pain on being handled, or lifted, and with the exception of a slight beading of the ribs, the distinctive signs of rickets were entirely absent.

Up to the onset of his illness this child was looked upon as a healthy, vigorous specimen of his age, and though he was anaemic-looking, it could not be said that he was fat, or flabby, or full-tissued. His is another instance of scurvy occurring in a child fed on condensed milk and patent food, and he further exemplifies the curious fact that the disease is met with chiefly amongst the children of the better classes ; in fact, to put it in another way, it would scarcely be too much to say that he was starving in the midst of plenty. *(Read June the 29th, 1901.)*

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